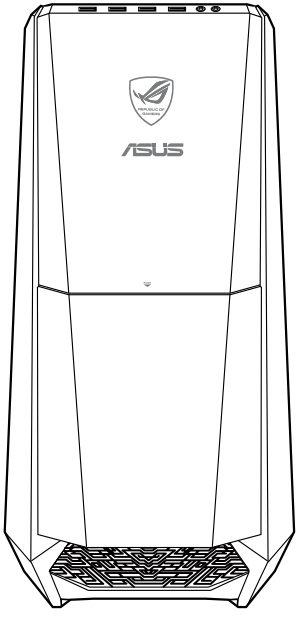
ASUS Gaming Desktop PC
ROG TYTAN CG8480
User Manual



English

E7944

Third Edition
January 2013

Contents

English

English

Contents

Notices

ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components, as well as the packaging materials. Please go to http://csr.asus.com/english/Takeback.htm for the detailed recycling information in different regions.

REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://csr.asus.com/english/REACH.htm

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference; and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

IC: Canadian Compliance Statement

Complies with the Canadian ICES-003 Class B specifications. This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cut appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Cet appareil est conforme aux normes CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes :

(1) cet appareil ne doit pas provoquer d'interférences et

(2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

VCCI: Japan Compliance Statement

VCCI Class B Statement

情報処理装置等電波障害自主規制について

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は家庭環境で使用されることを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

KC: Korea Warning Statement

B급 기기 (가정용 방송통신기자재)

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

*당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.

RF Equipment Notices

CE: European Community Compliance Statement

The equipment complies with the RF Exposure Requirement 1999/519/EC, Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0–300 GHz). This wireless device complies with the R&TTE Directive.

Wireless Radio Use

This device is restricted to indoor use when operating in the 5.15 to 5.25 GHz frequency band.

Exposure to Radio Frequency Energy

The radiated output power of the Wi-Fi technology is below the FCC radio frequency exposure limits. Nevertheless, it is advised to use the wireless equipment in such a manner that the potential for human contact during normal operation is minimized.

FCC Bluetooth Wireless Compliance

The antenna used with this transmitter must not be colocated or operated in conjunction with any other antenna or transmitter subject to the conditions of the FCC Grant.

Bluetooth Industry Canada Statement

This Class B device meets all requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

BSMI: Taiwan Wireless Statement

無線設備的警告聲明

經型式認證合格之低功率射頻電機，非經許可，公司，商號或使用者均不得擅自變更射頻，加大功率或變更原設計之特性及功能。低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信指依電信法規定作業之無線通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

於 5.25GHz 至 5.35GHz 區域內操作之
無線設備的警告聲明

工作頻率 5.250 ~ 5.350GHz 該頻段限於室內使用。

Japan RF Equipment Statement

この製品は、周波数帯域5.15～5.35G Hzで動作しているときは、屋内においてのみ使用可能です。

KC (RF Equipment)

대한민국 규정 및 준수
방통위고시에 따른 고지사항
해당 무선설비는 운용 중 전파혼신 가능성이 있음,
이 기기는 인명안전과 관련된 서비스에 사용할 수 없습니다.

Safety information

Disconnect the AC power and peripherals before cleaning. Wipe the Desktop PC using a clean cellulose sponge or chamois cloth dampened with solution of nonabrasive detergent and a few drops of warm water then remove any extra moisture with a dry cloth.

- **DO NOT** place on uneven or unstable work surfaces. Seek servicing if the casing has been damaged.
- **DO NOT** expose to dirty or dusty environments. **DO NOT** operate during a gas leak.
- **DO NOT** place or drop objects on top and do not shove any foreign objects into the Desktop PC.
- **DO NOT** expose to strong magnetic or electrical fields.
- **DO NOT** expose to or use near liquids, rain, or moisture. **DO NOT** use the modem during electrical storms.
- Battery safety warning: **DO NOT** throw the battery in fire. **DO NOT** short circuit the contacts. **DO NOT** disassemble the battery.
- Use this product in environments with ambient temperatures between 0˚C (32˚F) and 35˚C (95˚F).
- **DO NOT** cover the vents on the Desktop PC to prevent the system from getting overheated.
- **DO NOT** use damaged power cords, accessories, or other peripherals.
- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

TV Tuner (on selected models)

Note to CATV System Installer - This reminder is provided to call the CATV systems installer's attention to Section 820-93 of the National Electric Code, which provides guidelines for proper grounding and, in particular, specify that the Coaxial cable shield be connected to the grounding system of the building as close to the point of cable entry as practical.

Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

DANGER/WARNING: Information to prevent injury to yourself when completing a task.

CAUTION: Information to prevent damage to the components when completing a task.

IMPORTANT: Instructions that you MUST follow to complete a task.

NOTE: Tips and additional information to help you complete a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

ASUS websites

The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS website www.asus.com.

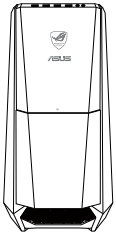
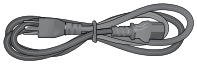
ASUS Local Technical Support

Visit ASUS website at http://support.asus.com/contact for the contact information of local Technical Support Engineer.

- The user manual is located in the following folder in your Desktop PC:

  C:\Program Files(X86)\ASUS\eManual

Package contents

		
ASUS ROG TYTAN CG8480 Gaming Desktop PC	Keyboard x1	Mouse x1
		
Power cord x1	Installation Guide x1	Warranty card x1
		
Nero 12 burning software DVD x1 (Optional)	Antenna x1 (optional)	Phoebus Control BOX (Optional)

- If any of the above items is damaged or missing, contact your retailer.
- The illustrated items above are for reference only. Actual product specifications may vary with different models.
- For details on using the bundled gaming keyboard and mouse, refer to sections **Using the ASUS ROG Gaming Keyboard** and **Using the ASUS GX900 Gaming Mouse**.

Chapter 1

Getting started

English

Welcome!

Thank you for purchasing the ASUS ROG TYTAN CG8480 Gaming Desktop PC!

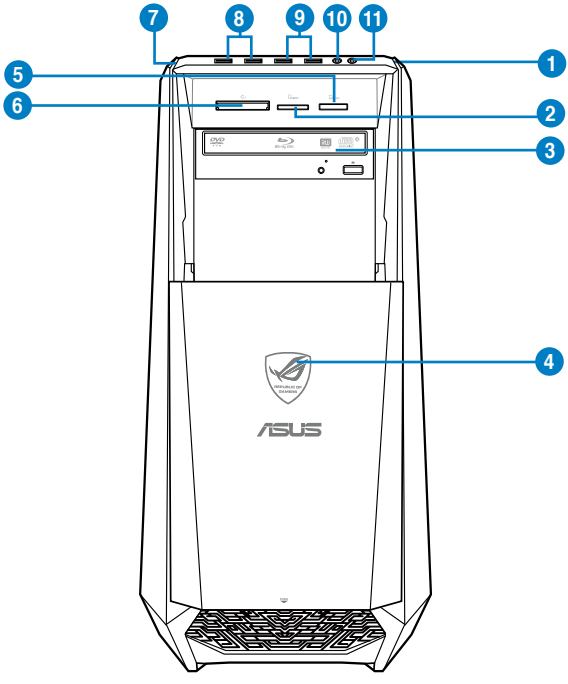
The ASUS ROG TYTAN CG8480 Desktop PC provides cutting-edge performance, uncompromised reliability, and user-centric utilities. All these values are encapsulated in a stunningly futuristic and stylish system casing.

Read the ASUS Warranty Card before setting up your ASUS Desktop PC.

Getting to know your computer

Illustrations are for reference only. The ports and their locations, and the chassis color vary with different models.

Front panel



1. **Power button.** Press this button to turn on your computer.

2. **Secure Digital™ / MultiMediaCard slot.** Insert a Secure Digital™ card or MultiMediaCard into this slot.

3. **Optical disk drive bay.** There is an optical disk drive in this bay.

4. **Power LED.** This LED lights up when you turn on your computer.

5. **Memory Stick™ / Memory Stick Pro™ card slot.** Insert a Memory Stick™ / Memory Stick Pro™ card into this slot.

6. **CompactFlash® / Microdrive™ card slot.** Insert a CompactFlash® / Microdrive™ card into this slot.

7. **OC Button.** This button adjusts the System Level Up profile of your computer.

8. **USB 3.0 ports.** These Universal Serial Bus 3.0 (USB 3.0) ports connect to USB 3.0 devices such as a mouse, printer, scanner, camera, PDA, and others.

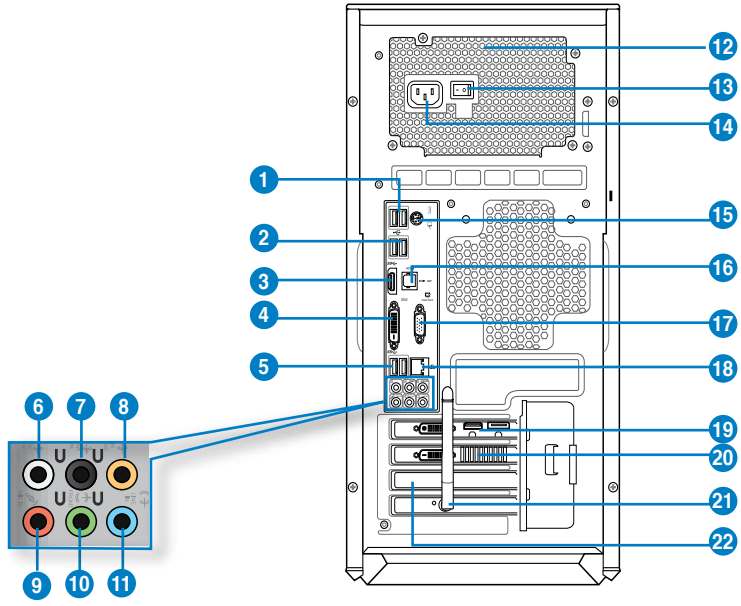
- DO NOT connect a keyboard / mouse to any USB 3.0 port when installing Windows® operating system.
- Due to USB 3.0 controller limitations, USB 3.0 devices can only be used under a Windows® OS environment and after USB 3.0 driver installation.
- USB 3.0 devices can only be used as data storage only.
- We strongly recommend that you connect USB 3.0 devices to USB 3.0 ports for faster and better performance for your USB 3.0 devices.

9. **USB 2.0 ports.** These Universal Serial Bus 2.0 (USB 2.0) ports connect to USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.

10. **Microphone port.** This port connects to a microphone.

11. **Headphone port.** This port connects to a headphone or speaker.

Rear panel



1 **USB 2.0 ports.** These Universal Serial Bus 2.0 (USB 2.0) ports connect to USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.

2 **USB 3.0 ports, support ASUS USB 3.0 Boost UASP Mode.** These Universal Serial Bus 3.0 (USB 3.0) ports connect to USB 3.0 devices such as a mouse, printer, scanner, camera, PDA, and others.

- The USB 3.0 ports only support Windows® 7 or later versions. UASP standard only supports Windows® 8.
- DO NOT connect a keyboard / mouse to any USB 3.0 port when installing Windows® operating system.
- Due to USB 3.0 controller limitation, USB 3.0 devices can only be used under Windows® OS environment and after the USB 3.0 driver installation.
- USB 3.0 devices can only be used as data storage only.
- We strongly recommend that you connect USB 3.0 devices to USB 3.0 ports for faster and better performance for your USB 3.0 devices.

3 **HDMI port.** This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-ray, and other protected content.

4 **DVI-D port.** This port is for any DVI-D compatible device and is HDCP compliant allowing playback of HD DVD, Blu-ray, and other protected content.

5 **USB 3.0 ports support ASUS USB 3.0 Boost UASP Mode. Bottom port supports USB BIOS Flashback.**

6 **Side Speaker Out port (gray).** This port connects to the side speakers in an 8-channel audio configuration.

7 **Rear Speaker Out port (black).** This port connects to the rear speakers in a 4, 6, and 8-channel audio configuration.

8 **Center/Subwoofer port (orange).** This port connects to the center/subwoofer speakers.

9 **Microphone port (pink).** This port connects to a microphone.

10 **Line Out port (lime).** This port connects to a headphone or speaker. In a 4, 6, or 8-channel configuration, the function of this port becomes Front Speaker Out.

11 **Line In port (light blue).** This port connects to a tape, CD, DVD player, or other audio sources.

Refer to the audio configuration table below for the function of the audio ports in a 2, 4, 6, or 8-channel configuration.

Audio 2, 4, 6, or 8-channel configuration

Port	Headset 2-channel	4-channel	6-channel	8-channel
Light Blue	Line In	Line In	Line In	Line In
Lime	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Mic In	Mic In
Orange	–	–	Center/Subwoofer	Center/Subwoofer
Black	–	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Gray	–	–	–	Side Speaker Out

12 **Air vents.** These vents allow air ventilation.

DO NOT block the air vents on the chassis. Always provide proper ventilation for your computer.

13 **Power switch.** Switch to turn ON/OFF the power supply to your computer.

14 **Power connector (input rated: 100-120V~/ 10A, 200-240V~/ 5A, 60/50Hz).** Plug the power cord to this connector.

15 **PS/2 Keyboard / Mouse combo port.** This port is for a PS/2 keyboard or mouse.

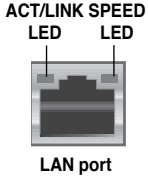
16 **Optical S/PDIF_OUT port.** This port connects to an external audio output device via an optical S/PDIF cable.

17 **VGA port.** This port is for VGA-compatible devices such as a VGA monitor.

18 **LAN (RJ-45) port.** This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.

LAN port LED indications

Activity/Link LED		Speed LED	
Status	Description	Status	Description
OFF	No link	OFF	10Mbps connection
ORANGE	Linked	ORANGE	100Mbps connection
BLINKING	Data activity	GREEN	1Gbps connection



19 **Sound card ports (optional).** These ports connect to your output devices such as microphones, headsets and speakers.

20 **ASUS Graphics Card (optional).** The display output ports on this optional ASUS Graphics Card may vary with different models.

21 **Wifi Card (optional).** An optional WLAN card allows your computer to connect to a wireless network.

22 **Expansion slot bracket.** Remove the expansion slot bracket when installing an expansion card.

Setting up your computer

This section guides you through connecting the main hardware devices, such as the external monitor, keyboard, mouse, and power cord, to your computer.

Connecting an external monitor

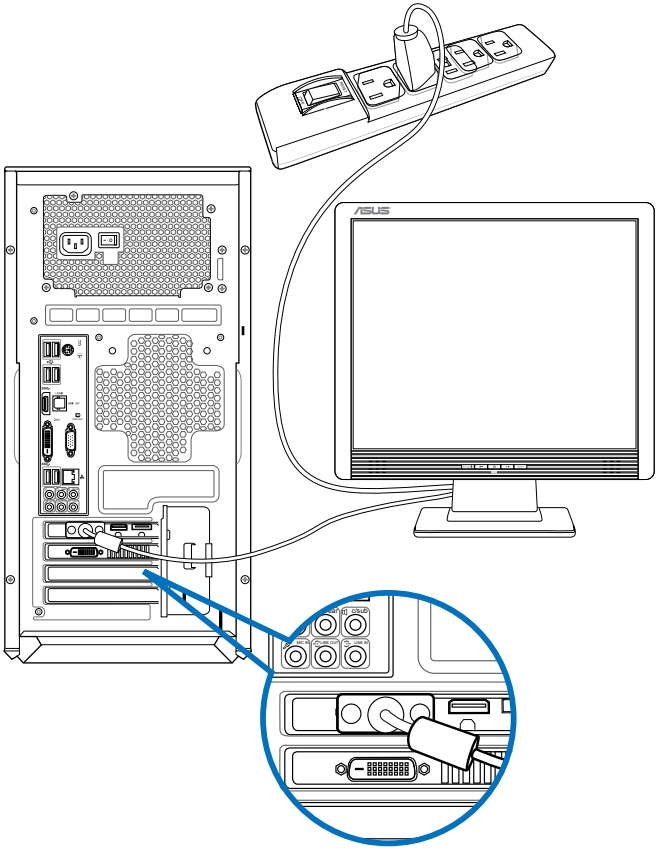
Using the ASUS Graphics Card (on selected models only)

Connect your monitor to the display output port on the discrete ASUS Graphics Card.

To connect an external monitor using the ASUS Graphics Card:

1. Connect a monitor to a display output port on the ASUS Graphics Card.
2. Plug the monitor to a power source.

The display output ports on the ASUS Graphics Card may vary with different models.

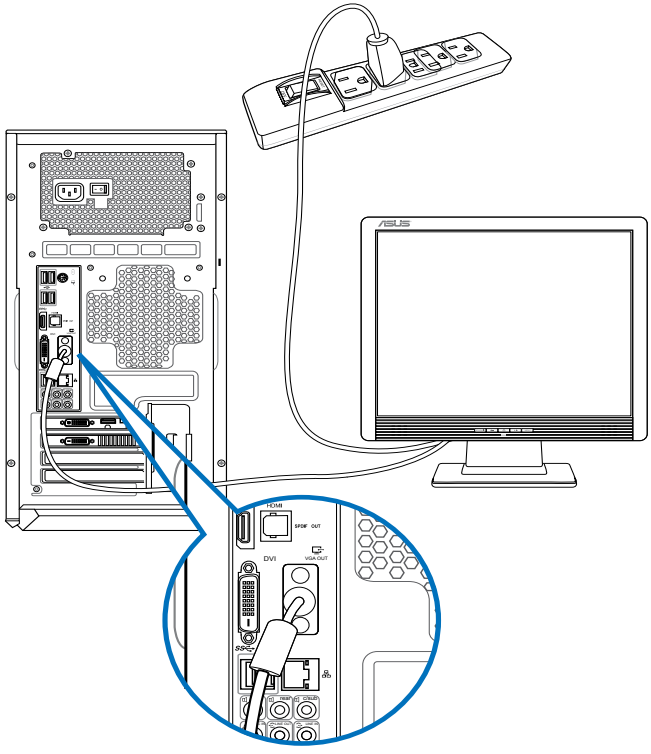


Using the onboard display output ports

Connect your monitor to the onboard display output port.

To connect an external monitor using the onboard display output ports:

1. Connect a VGA monitor to the VGA port, or a DVI-D monitor to the DVI-D port, or an HDMI monitor to the HDMI port on the rear panel of your computer.
2. Plug the monitor to a power source.

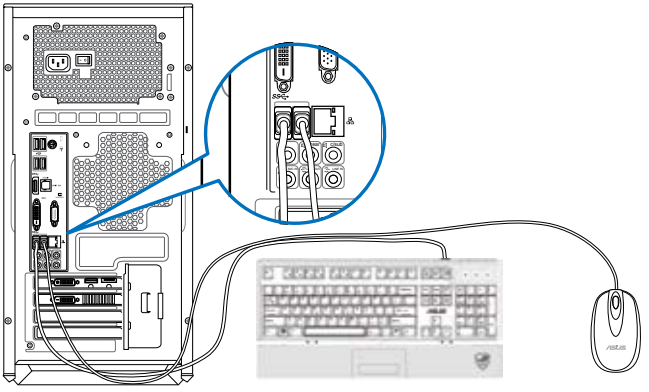


- If your computer comes with an ASUS Graphics Card, the graphics card is set as the primary display device in the BIOS. Connect your monitor to a display output port on the graphics card.
- To connect multiple external monitors to your computer, refer to **Connecting multiple external monitors** in Chapter 3 of this user manual for details.

Connecting a USB keyboard and a USB mouse

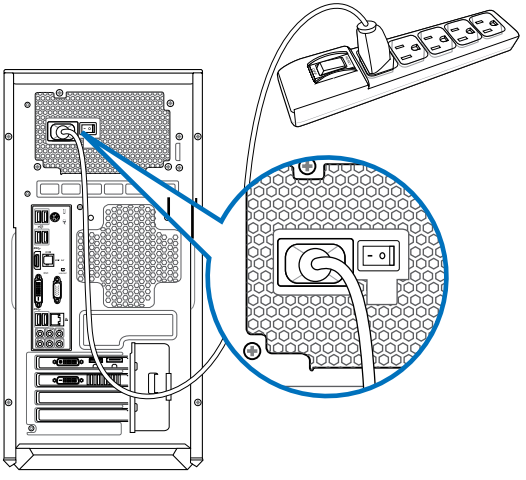
Connect a USB keyboard and a USB mouse to the USB ports on the rear panel of your computer.

The pre-installed setup utility for the bundled ASUS GX900 Gaming Mouse can be accessed only when connecting the mouse to your computer before starting Windows® 8 for the first time. Otherwise, you will have to manually install the setup utility from the bundled Support DVD. Refer to section **Using the ASUS GX900 Gaming Mouse** of Chapter 4 for details.



Connecting the power cord

Connect one end of the power cord to the power connector on the rear panel of your computer and the other end to a power source.



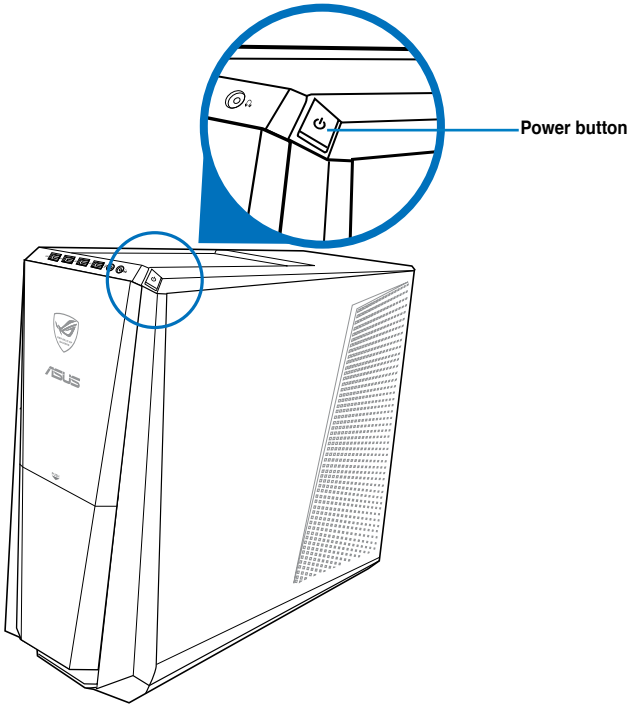
Turning your computer ON

This section describes how to turn on your computer after setting up your computer.

Turning your computer ON

To turn your computer ON:

1. Turn your monitor ON.
2. Turn the power switch ON, then press the power button on your computer.



3. Wait until the operating system loads automatically.

For details on shutting down your Desktop PC, refer to the section **Turning your Desktop PC OFF** in Chapter 2.

Chapter 2

Using Windows® 8

English

Starting for the first time

When you start your computer for the first time, a series of screens appear to guide you in configuring the basic settings of your Windows® 8 operating system.

To start for the first time:

1. Turn your computer on. Wait for a few minutes until the setup screen appears.
2. Carefully read the license terms. Tick **I accept the license terms for using Windows** and click **Accept**.
3. Follow the next onscreen instructions to configure the following basic items:
   - Personalize
   - Settings
4. Once you are done configuring the basic items, the Windows® 8 video tutorial appears. Watch this tutorial to learn more about Windows® 8 functionalities.

For details on using Windows® 8, refer to the next sections.

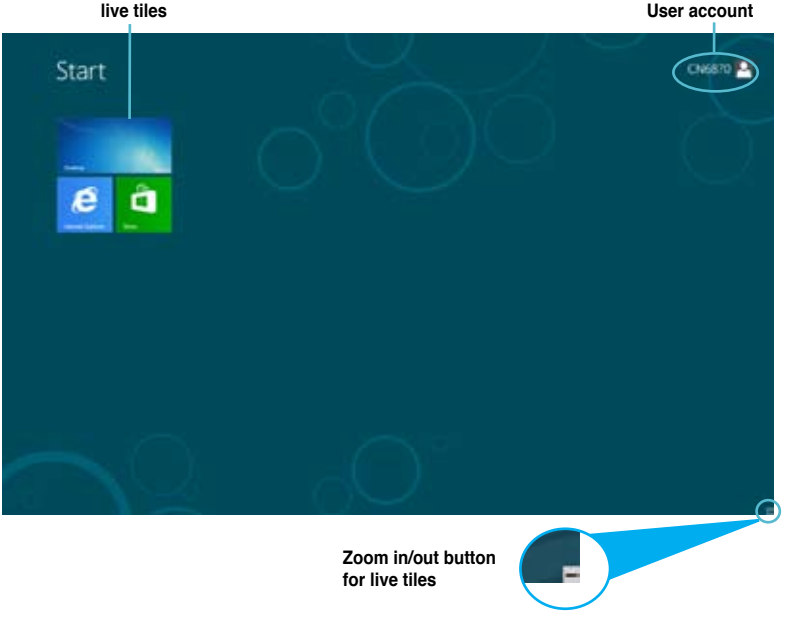
Using the Windows® UI

The Windows® User Interface (UI) is the tile-based display used in Windows® 8. It includes the following features you can use while working on your Desktop PC.

Start screen

The Start screen appears after successfully signing in to your user account. It helps organize all the programs and applications you need in just one place.

You can press the Windows key  to launch the Start screen from any apps.



Windows® Apps

These are apps pinned on the Start screen and displayed on tiled-format for easy access.

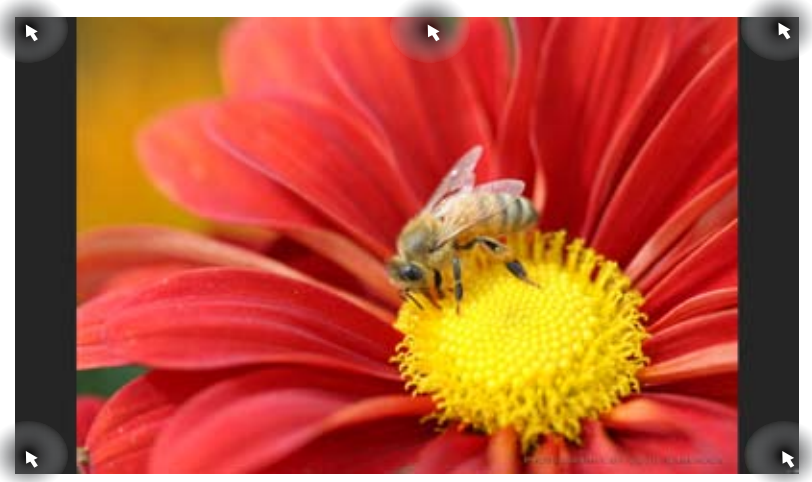
A screen resolution of 1024 x 768 pixels or higher is required to run Windows® apps.

Some apps require signing in to your Microsoft account before they are fully launched.

Hotspots

Onscreen hotspots allow you to launch programs and access the settings of your Desktop PC. The functions in these hotspots can be activated using your mouse.

Hotspots on a running app



Hotspots on the Start screen

Refer to the next page for the Hotspots' functions.

Hotspot	Action
upper left corner	Hover your mouse pointer then click on the recent app's thumbnail to go back to that app. Move your mouse pointer down to display all the running apps.
lower left corner	**From a running app screen:** Hover your mouse pointer then click on the Start screen's thumbnail to go back to the Start screen. **NOTE:** You can also press the Windows key  on your keyboard to go back to the Start screen. **From the Start screen:** Hover your mouse pointer then click on the recent app's thumbnail to go back to that app.
top	Hover your mouse pointer until it changes to a hand icon. Drag then drop the app to a new location. **NOTE:** This hotspot function only works on a running app or when you want to use the Snap feature. For more details, refer to **Snap feature** under **Working with Windows® apps**.
upper and lower right corner	Hover your mouse pointer to launch the Charm bar.

Working with Windows® apps

Use your Desktop PC's keyboard or mouse to launch and customize your apps.

Launching apps

- Position your mouse pointer on an app then left-click once to launch it.
- Press <Tab> twice then use the arrow keys to browse through the apps. Press <Enter> to launch your selected app.

Customizing apps

You can move, resize, or unpin apps from the Start screen using the following steps.

- To move an app, drag and drop the app to a new location.

Resizing apps

Right-click the app to activate its settings bar then click **Smaller**.

Unpinning apps

To unpin an app from the Start screen, right-click on the app to activate its settings bar then click **Unpin from Start**.

Closing apps

- Move your mouse pointer on the top side of the launched app then wait for the pointer to change to a hand icon.
- Drag then drop the app to the bottom of the screen to close it.
- From the running app's screen, press <Alt> + <F4>.

Accessing the All Apps screen

From the All Apps screen, you can configure an apps settings or pin an app to the Start Screen or to the Desktop mode taskbar.

Launching the All Apps screen

Right-click on the Start screen or press + <Z>, and click the All Apps icon.

Pinning an app on the Start screen

1. Launch the All Apps screen.
2. From the All Apps screen, right-click an app to display its settings bar.
3. From the settings bar, click **Pin to Start**.

Charm bar

The Charm bar is a toolbar that can be triggered on the right side of your screen. It consists of several tools that allow you to share applications and provide quick access for customizing the settings of your Desktop PC.

Launching the Charm bar

When called out, the Charm bar initially appears as a set of white icons. The image above shows how the Charm bar looks like once activated.

Use your Desktop PC's mouse or keyboard to launch the Charm bar.

- Move your mouse pointer on the upper or lower right corner of the screen.
- Press + <C>.

Inside the Charm bar

	**Search** This tool allows you to look for files, applications, or programs in your Desktop PC.
	**Share** This tool allows you to share applications via social networking sites or email.
	**Start** This tool reverts the display back to the Start screen. From the Start screen, you can also use this to revert back to a recently opened app.
	**Devices** This tool allows you to access and share files with the devices attached to your Desktop PC such as an external display or printer.
	**Settings** This tool allows you to access the PC settings of your Desktop PC.

Snap feature

The Snap feature displays two apps side-by-side, allowing you to work or switch between apps.

A screen resolution of at least 1366 x 768 pixels is required to use the Snap feature.

Using Snap

To use Snap:

1. Use your Desktop PC's mouse or keyboard to activate Snap onscreen.

   Using your mouse

   a) Click on an app to launch it.

   b) Hover the mouse pointer on the top side of your screen.

   c) Once the pointer changes to a hand icon, drag and drop the app to the right or left side of the display panel.

   Using your keyboard

   • Launch an app then press + < . > to activate the Snap bar. The first app would automatically be placed in the smaller display area.

2. Launch another app. This second app will automatically appear in the bigger display area.

3. To switch between apps, press + <J>.

Other keyboard shortcuts

Using your keyboard, you can also use the following shortcuts to help you launch applications and navigate Windows®8.

	Switches between the Start screen and the last running app.
+ <D>	Launches the desktop.
+ <E>	Launches the Computer window on the desktop.
+ <F>	Opens the File search pane.
+ <H>	Opens the Share pane.
+ <I>	Opens the Settings pane.
+ <K>	Opens the Devices pane.
+ <L>	Activates the Lock screen.
+ <M>	Minimizes the Internet Explorer window.
+ <P>	Opens the Second screen pane.
+ <Q>	Opens the Apps search pane.
+ <R>	Opens the Run window.
+ <U>	Opens Ease of Access Center.
+ <W>	Opens the Settings search pane.
+ <X>	Opens a menu box of Windows tools

+ <+>	Launches the magnifier and zooms in your screen.
+ <->	Zooms out your screen.
+ <,>	Allows you to peek at the desktop.
+ <Enter>	Opens the Narrator Settings.
+ <Prt Sc>	Enables the print screen function.

Turning your Desktop PC OFF

To turn your Desktop PC OFF:

Do any of the following to shut down your Desktop PC:

- From the Charm bar, click **Settings** > **Power** > **Shut down** to do a normal shutdown.
- From the login screen, click **Power** > **Shutdown**.
- If your Desktop PC is unresponsive, press and hold the power button for at least four (4) seconds until your Desktop PC turns off.

Putting your Desktop PC to sleep

To put your Desktop PC on Sleep mode, press the Power button once.

Entering the BIOS Setup

BIOS (Basic Input and Output System) stores system hardware settings that are needed for system startup in the Desktop PC.

In normal circumstances, the default BIOS settings apply to most conditions to ensure optimal performance. Do not change the default BIOS settings except in the following circumstances:

- An error message appears on the screen during the system bootup and requests you to run the BIOS Setup.
- You have installed a new system component that requires further BIOS settings or update.

Inappropriate BIOS settings may result to instability or boot failure. We strongly recommend that you change the BIOS settings only with the help of a trained service personnel.

Quickly enter the BIOS

Windows® 8 boot time is quite fast, so we developed the following two ways for you to quickly access the BIOS:

- Press the power button for at least four seconds to shut down your Desktop PC, then press the power button again to turn your Desktop PC back on, and press <Del> during POST.
- When your Desktop PC is off, disconnect the power cord from your Desktop PC's power connector. Reconnect the power cord and press the power button to turn on your Desktop PC. Press <Del> during POST.

POST (Power-On Self Test) is a series of software controlled diagnostic tests that run when you turn on your Desktop PC.

Chapter 3

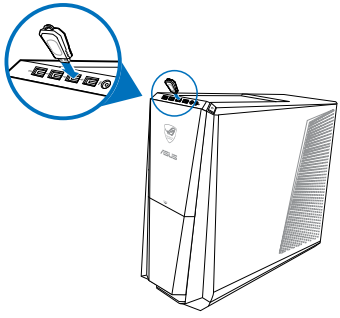
Connecting devices to your computer

Connecting a USB storage device

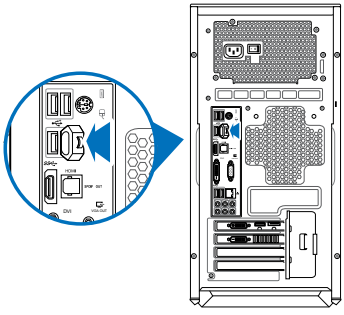
This desktop PC provides USB 2.0/1.1 and USB 3.0 ports on both the front and rear panels. These USB ports allow you to connect USB devices such as storage devices.

To connect a USB storage device:

- Insert the USB storage device to your computer.



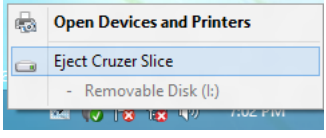
Front panel

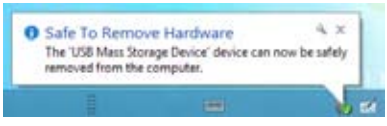


Rear panel

To remove a USB storage device:

1. From the Start screen, click **Desktop** to launch the Desktop Mode.
2. Click from the taskbar, then click **Eject [Name of USB Drive]**.
3. When the **Safe to Remove Hardware** message pops up, remove the USB storage device from your computer.



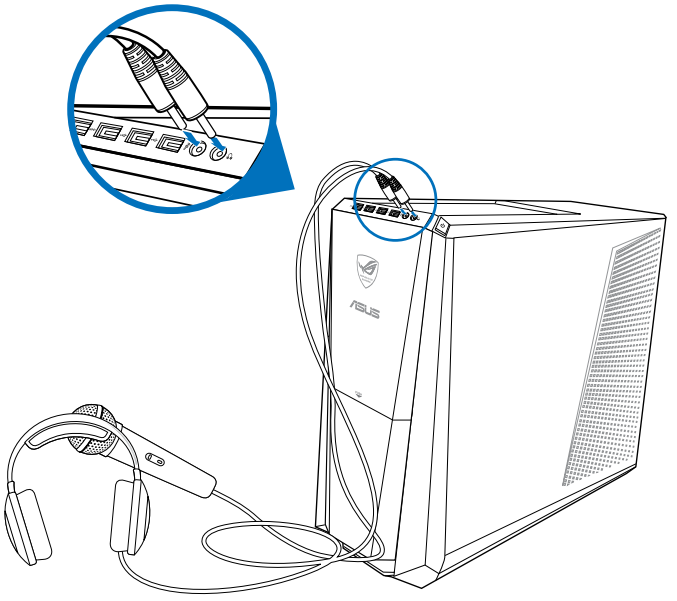


DO NOT remove a USB storage device when data transfer is in progress. Doing so may cause data loss or damage the USB storage device.

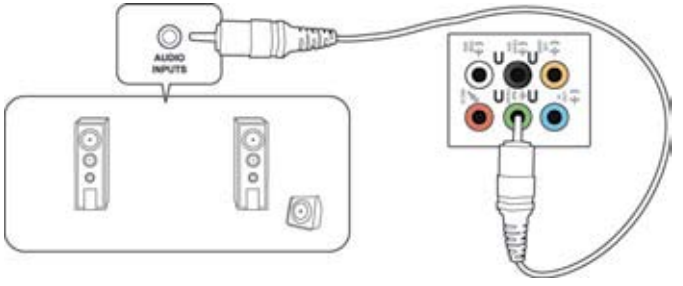
Connecting microphone and speakers

This desktop PC comes with microphone ports and speaker ports on both the front and rear panels. The audio I/O ports located on the rear panel allow you to connect 2-channel, 4-channel, 6-channel, and 8-channel stereo speakers.

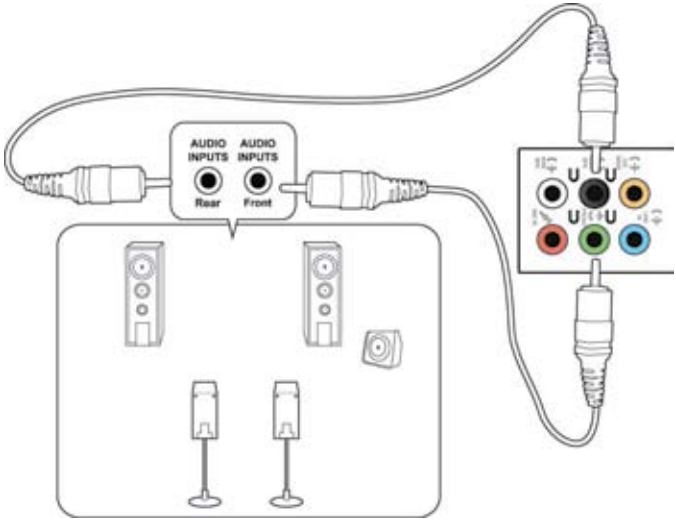
Connecting Headphone and Mic



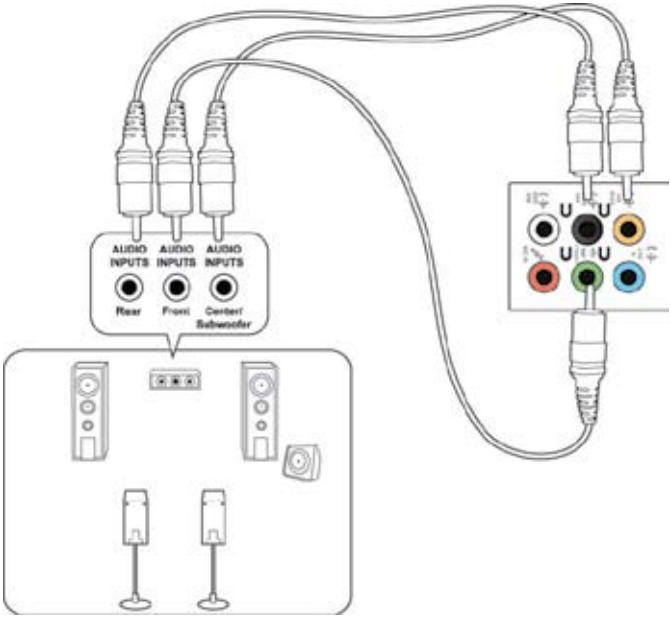
Connecting 2-channel Speakers



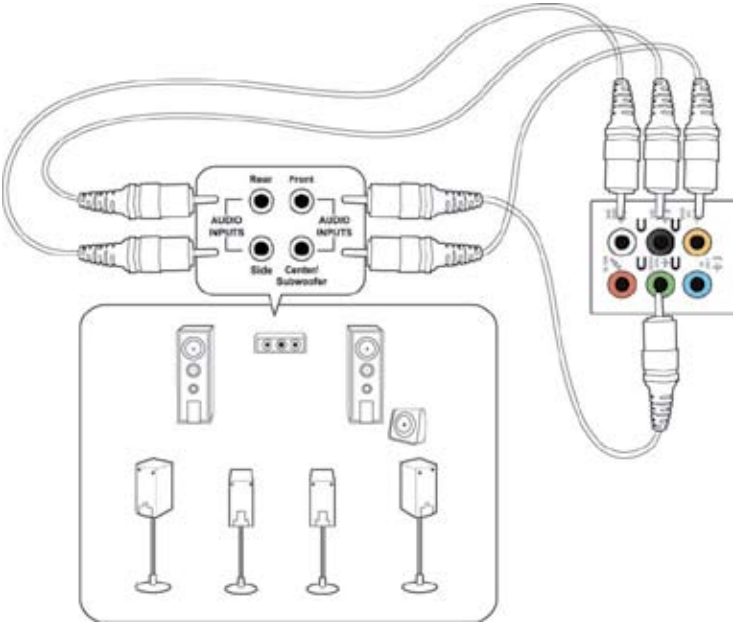
Connecting 4-channel Speakers



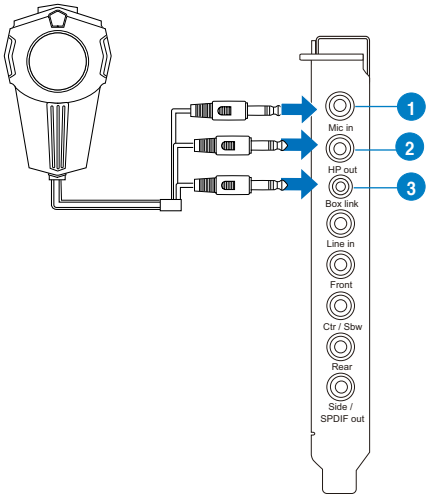
Connecting 6-channel Speakers



Connecting 8-channel Speakers

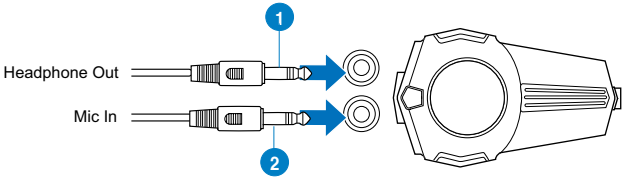


Connecting the Phoebus Box (with a Phoebus Sound card)



No	Item	Description
1	Microphone In Port	Connect the microphone's 3.5mm plug from the Phoebus Control Box into this Mic-In port for voice communication, recording or karaoke.
2	Headphone Port	The headphone port has a built-in high-quality amplifier to drive headphones. Connect the Phoebus Control box directly to this port.
3	Box Link Port	Connect Phoebus Control box directly to this port.

Connecting the Phoebus Control Box with an external headphone and microphone



No	Item	Description
1	Headphone Port	Connect the headphone to the headphone port on the Phoebus Control box.
2	Microphone In Port	Connect the microphone's 3.5mm plug to the Mic-In port on the Phoebus Control Box.

Switching Sound and Recording Devices

To switch between the sound and recording device from the Phoebus control box and FIO audio jack:

1. Right-click on the volume icon on the System Tray and click **Playback devices**.

2. Click the Recording or Playback tab and right-click on the audio device. Click **Set as Default Communication Device**.

Connecting multiple external displays

Your desktop PC may come with VGA, HDMI, or DVI ports and allows you to connect multiple external displays.

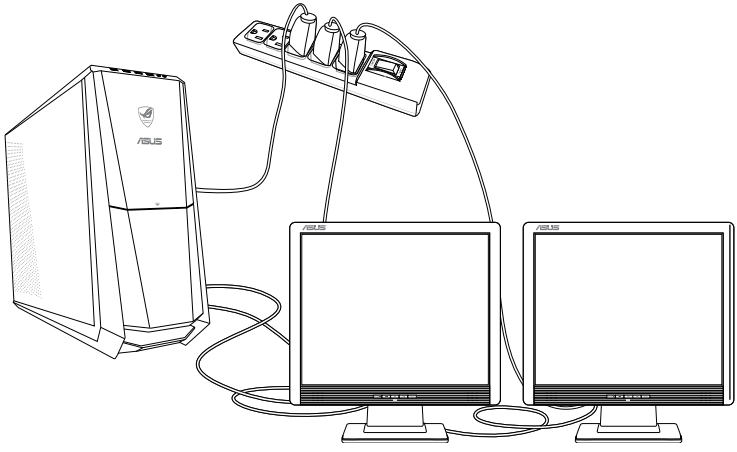
When a graphics card is installed in your computer, connect the monitors on the output ports of the graphics card.

Setting up multiple displays

When using multiple monitors, you are allowed to set display modes. You can use the additional monitor as a duplicate of your main display, or as an extension to enlarge your Windows desktop.

To set up multiple displays:

1. Turn off your computer.
2. Connect the two monitors to your computer and connect the power cords to the monitors. Refer to **Setting up your computer** section in Chapter 1 for details on how to connect a monitor to your computer.



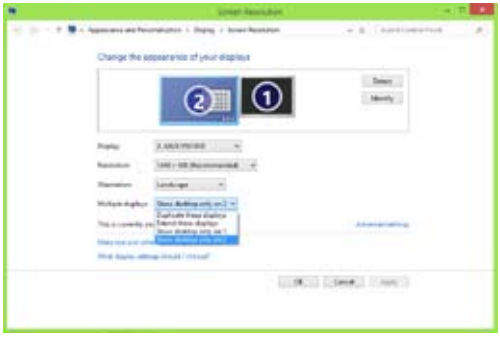
For some graphic cards, only the monitor that is set to be the primary display has display during POST. The dual display function works only under Windows.

3. Turn on your computer.
4. Do any of the following to open the **Screen Resolution** setting screen:
   From the Start screen
   a) Launch the All Apps screen and pin Control Panel on the Start screen.

For details, refer to **Pinning an app on the Start screen** from the section **Working with Windows® apps**.

   b) From the Control Panel, click **Adjust screen resolution** under **Appearance and Personalization**.

   From the Desktop mode screen
   a) Launch the Desktop mode from the Start screen.
   b) Right click anywhere on your Desktop mode screen. When the pop-up menu appears, click **Personalize** > **Display** > **Change display settings**.
5. Select the display mode from the **Multiple displays:** drop-down list.
   - **Duplicate these displays**: Select this option to use the additional monitor as a duplicate of your main display.
   - **Extend these displays**: Select this option to use the additional monitor as an extension display. This increases your desktop space.
   - **Show desktop only on 1 / 2**: Select this option to show desktop only on monitor 1 or monitor 2.

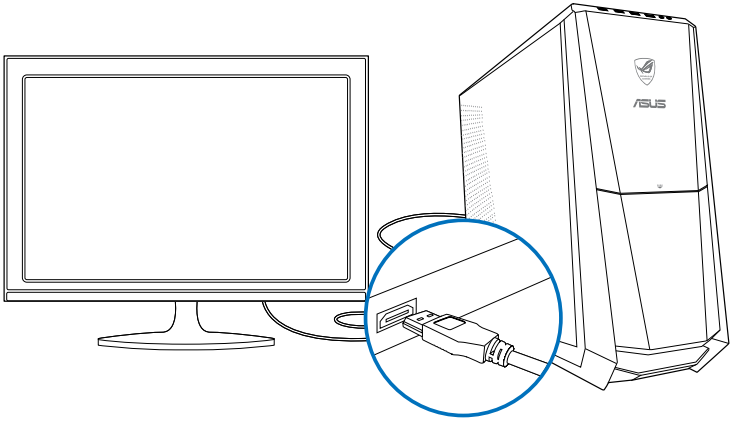


6. Click **Apply** or **OK**. Then click **Keep Changes** on the confirmation message.

Connecting an HDTV

Connect a High Definition TV (HDTV) to the HDMI port of your computer.

- You need an HDMI cable to connect the HDTV and the computer. The HDMI cable is purchased separately.
- To get the best display performance, ensure that your HDMI cable is less than 15 meters.



Chapter 4
Using your computer

Proper posture when using your Desktop PC

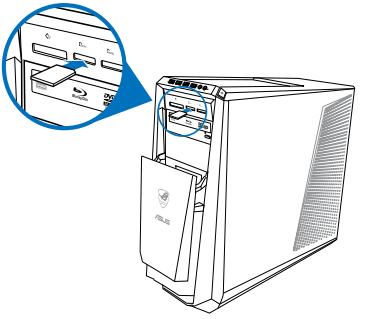
When using your Desktop PC, maintaining the proper posture is necessary to prevent strain to your wrists, hands, and other joints or muscles. This section provides you with tips on avoiding physical discomfort and possible injury while using and fully enjoying your Desktop PC.

To maintain the proper posture:

- Position your computer chair to make sure that your elbows are at or slightly above the keyboard to get a comfortable typing position.
- Adjust the height of your chair to make sure that your knees are slightly higher than your hips to relax the backs of your thighs. If necessary, use a footrest to raise the level of your knees.
- Adjust the back of your chair so that the base of your spine is firmly supported and angled slightly backward.
- Sit upright with your knees, elbows and hips at an approximately 90º angle when you are at the PC.
- Place the monitor directly in front of you, and turn the top of the monitor screen even with your eye level so that your eyes look slightly downward.
- Keep the mouse close to the keyboard, and if necessary, use a wrist rest for support to reduce the pressure on your wrists while typing.
- Use your Desktop PC in a comfortably-lit area, and keep it away from sources of glare such as windows and straight sunlight.
- Take regular mini-breaks from using your Desktop PC.

Using the memory card reader

Digital cameras and other digital imaging devices use memory cards to store digital picture or media files. The built-in memory card reader on the front panel of your system allows you to read from and write to different memory card drives.



To use the memory card:

1. Insert the memory card into the card slot.

- A memory card is keyed so that it fits in only one direction. DO NOT force a card into a slot to avoid damaging the card.
- You can place media in one or more of the card slots and use each media independently. Place only one memory card in a slot at one time.

2. Select a program from the AutoPlay window to access your files.

- If AutoPlay is NOT enabled in your computer, hover your mouse pointer over the lower left corner of Windows® desktop then right-click on the Start screen's thumbnail. From the pop-up menu, click **File Explorer**, and then double-click the memory card icon to access the data on it.
- Each card slot has its own drive icon which is displayed on the **Computer** screen.
- The memory card reader LED lights up and blinks when data is being read from or written to the memory card.

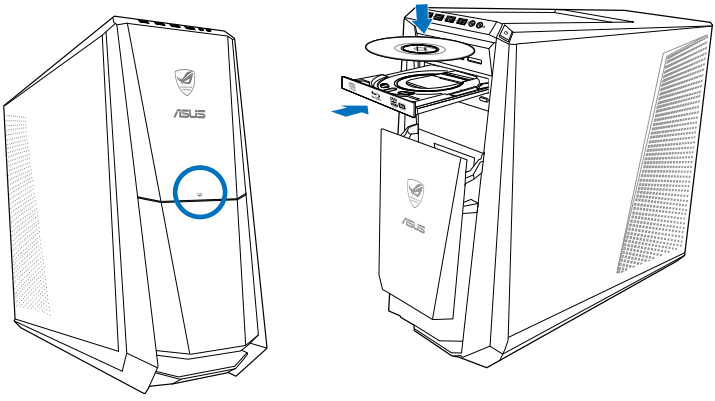
3. When finished, right-click the memory card drive icon on the **Computer** screen, click **Eject**, and then remove the card.

Hover your mouse pointer over the lower left corner of Windows® desktop then right-click on the Start screen's thumbnail. From the pop-up menu, click **File Explorer** to open the Computer screen.

Never remove cards while or immediately after reading, copying, formatting, or deleting data on the card or else data loss may occur.

To prevent data loss, use "Safely Remove Hardware and Eject Media" in the Windows notification area before removing the memory card.

Using the optical drive



Inserting an optical disc

To insert an optical disc:

1. While your system is on, press the **PUSH** button.
2. Press the eject button below the drive bay cover to open the tray.
3. Place the disc to the optical drive with the label side facing up.
4. Push the tray to close it.
5. Select a program from the AutoPlay window to access your files.

If AutoPlay is NOT enabled in your computer, hover your mouse pointer over the lower left corner of Windows® desktop then right-click on the Start screen's thumbnail. From the pop-up menu, click **File Explorer**, and then double-click the CD/DVD drive icon to access the data on it.

Removing an optical disc

To remove an optical disc:

1. While the system is on, do either of the following to eject the tray:
   - Press the eject button below the drive bay cover.
   - Right-click the CD/DVD drive icon on the **Computer** screen, and then click **Eject**.

Hover your mouse pointer over the lower left corner of Windows® desktop then right-click on the Start screen's thumbnail. From the pop-up menu, click **File Explorer** to open the Computer screen.

2. Remove the disc from the disc tray.

Using the ASUS ROG U9N Gaming Keyboard

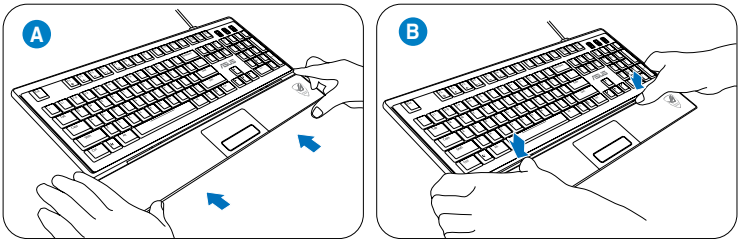
Your CG8580 Essentio Desktop PC comes with the bundled ASUS ROG U9N Gaming Keyboard for an optimal gaming experience.

Check the section **Package contents** for the package contents of the ASUS ROG U9N Gaming Keyboard.

Installing the ASUS ROG U9N Gaming Keyboard

1. Use the bundled PS/2 to USB adaptor to connect your gaming keyboard to your computer's USB 2.0 port.

2. Align and insert the wrist pad into the gaming keyboard's wrist pad slots (A). Using both thumbs, push down the wrist pad until it snaps in place (B).



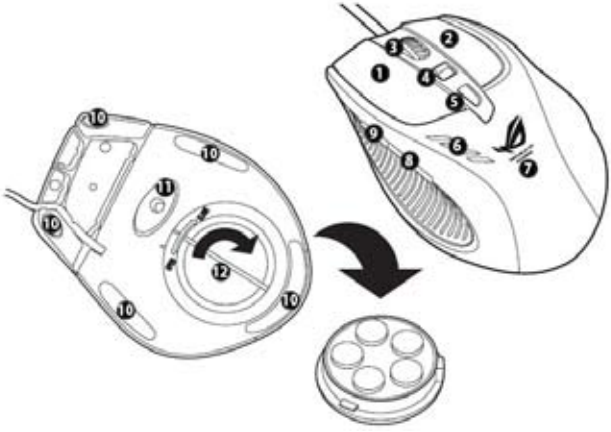
3. Restart your computer. Windows® automatically installs all necessary drivers for your keyboard.

Using the ASUS GX900 Gaming Mouse

Your CG8580 Essentio Desktop PC comes with the bundled ASUS GX900 Gaming Mouse for your full-blast game control.

Check the section **Package contents** for the package contents of the ASUS GX900 Gaming Mouse.

The ASUS GX900 Gaming Mouse comes with a left button, a right button, a scroll wheel, two side buttons, a DPI button, and a specially designed Profile Switch button.



Keys	Description	Keys	Description
1	Left button	7	GX900 logo
2	Right button	8	IE Forward button
3	Scroll wheel	9	IE Backward button
4	DPI switch	10	Mouse feet
5	Profile switch button/Profile indicator*	11	Mouse feet and Twin-Eye Laser sensor
6	LED DPI indicator**	12	Weight base (5 x 4.5g blocks)***

*** To adjust the mouse weight, add or remove the weight blocks.

*Profile switch LED indications	
LED colors	**Indications**
None	Normal Profile
Green	Profile 1
Red	Profile 2
Orange	Profile 3

**DPI switch LED indications	
LED colors	**Indications**
2	DPI Level 1
4	DPI Level 2

Launching the program

A specially designed program is pre-installed on your computer, which allows you to set up your ASUS GX900 Gaming Mouse to avail all its features.

When you connect ASUS GX900 Gaming Mouse to your computer before starting Windows® 8 for the first time, the program automatically detected the mouse and can be accessed directly. Otherwise, you will have to manually install the setup utility from the bundled Support DVD.

To install the program from Support DVD, place the support DVD into the optical drive and follow the onscreen instructions to launch the program.

If Autorun is NOT enabled in your computer, browse the contents of the support DVD to locate the **GX900.exe** file. Double-click the **GX900.exe** file to launch the program.

Setting your ASUS GX900 Gaming Mouse

Ensure that your gaming mouse is connected to your computer's USB port. The program automatically detects the mouse and displays the main menu.

Main Menu

Items	Description
1	Click each tab to display the selected profile menu.
2	Displays the profile icon to configure profile 1-3 menus.
3	Click to reset the DPI configuration to the previously saved settings.
4	Drag the slider to adjust the DPI value for each level.
5	Click to reset the button settings to the previous settings
6	Click to display the different profile color indicators and their status.
7	Click to load the saved profile to your mouse.
8	Click to save the current profile settings to your hard disk drive.
9	Click to reset all the mouse settings to the factory default settings.
10	Click to save the settings you have made.
11	Click to save the settings you have made and exit the program.

* Each profile provides two DPI levels. Two DPI switch LEDs light up indicating that you are using Level 1, and four LEDs light up indicating that you are using Level 2.

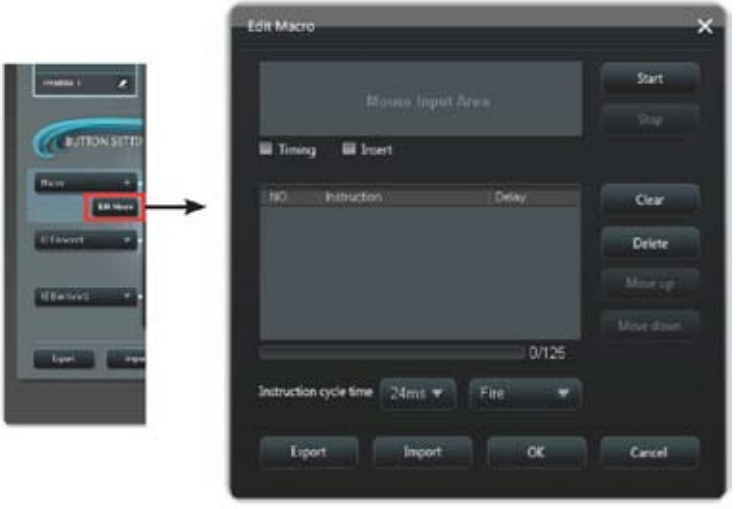
Profile 1 menu

Items	Description
1	Click to open the Edit menu and change the profile name and profile icon.
2	Enter the desired profile name.
3	Click to locate the image file you want to use as the profile icon.
4	Select the function for each button/action from the drop down list. * Refer to the table below for more details.

Functions	Description
L-Button	Left mouse button function
R-Button	Right mouse button function
M-Button	Middle mouse button function
IE Backward	IE Backward button function. If selected, press the button to go back to the previous page.
IE Forward	IE Forward button function. If selected, press the button to go to the next page.

Functions	Description
Keyboard	Press the button to perform a keystroke or keystroke sequence.
Macro	Press the button to run a command or series of commands that you can edit via the Edit Macro menu. See **Macro menu** for details.
Script #1-6	Press the button to run a script that you can edit via the Edit Script menu. See **Edit Script menu** for details.
DPI [+]	Press the button to increase the DPI value.
DPI [-]	Press the button to decrease the DPI value.
DPI Level 1/2	Press the button to use the DPI Level 1/2.
Profile Switch	Profile Switch button function.
Normal Profile	Press the button to use the normal profille.
User Profile 1/2/3	Press the button to use the customized profile 1/2/3.
Wheel (left/right)	Press the button to scroll leftward/rightward as a tilt wheel does. This function only works for Microsoft® Office applications under the Windows® Vista/7/8 operating systems.
Rapid Fire (mouse)	Press the button to do a rapid fire in a click-to-attack game, which is the same as triple clicking the left mouse button.
Rapid Fire (key)	Press the button to do a rapid fire in a game using the spacebar to attack, which is the same as pressing the keyboard's spacebar thrice.
Web Browser	Press the button to launch your default web browser.
E-mail	Press the button to launch your default e-mail application.
Media Player	Press the button to launch your default media player.
Play/Pause	These buttons become playback control buttons in an active media player.
Stop	
Next Track	
Prev Track	
Volume Up/Down	Press the button to increase/decrease the system volume.
Mute	Press the button to turn the volume's mute mode on/off.
Calculator	Press the button to launch the Calculator application.
My Computer	Press the button to open My Computer window.
Disabled	Select this item to deactivate the mouse's selected button.

Edit Macro menu



Items	Description
Edit Macro	Click to open the Edit Macro menu.
Timing	Check this item to record the time between pressing down and releasing a button. (Default: 12 milliseconds)
Insert	When checked, the new instruction will be inserted before the selected instruction. Otherwise, any new instruction will be given the first priority.
Start*	Click to start recording the keystrokes and/or mouse actions.
Stop	Click to stop recording the keystrokes and/or mouse actions.
Clear	Click to clear all saved instructions.
Move up/down	Click to move up/down the selected instruction.
Instruction cycle time	When Timing is unchecked, all the actions' delay time will be the value you chose from the drop down list.
Loop	Sets the macro to run at a click and stop when clicked again.
Fire	Sets the macro to run once in one click.
Keeping fire	Sets the macro to run when you hold down the button and stop when you release the button.
Export	Click to save the current macro to your hard disk drive.
Import	Click to load a macro from your hard disk drive.

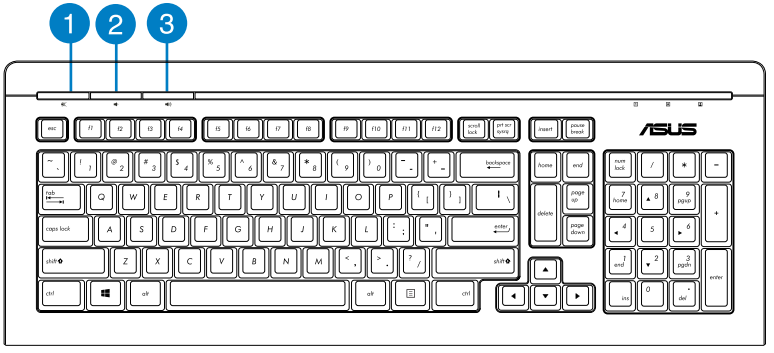
Edit Script menu

Items	Description
Edit Script	Click to open the Edit Script menu.
Timing	Check this item to record the time between pressing down and releasing a button. (Default: 12 milliseconds)
Insert	When checked, the new instruction will be inserted before the selected instruction. Otherwise, any new instruction will be given the first priority.
Start	Click to start recording the keystrokes and/or mouse actions.
Stop	Click to stop recording the keystrokes and/or mouse actions.
Clear	Click to clear all saved instructions.
Move up/down	Click to move up/down the selected instruction.
Instruction cycle time	When Timing is unchecked, all the actions' delay time will be the value you chose from the drop down list.
Loop	Sets the script to run at a click and stop when clicked again.
Fire	Sets the script to run once in one click.
Keeping fire	Sets the script to run when you hold down the button and stop when you release the button.
Export	Click to save the current script to your hard disk drive.
Import	Click to load a script from your hard disk drive.

Using the keyboard (on selected models only)

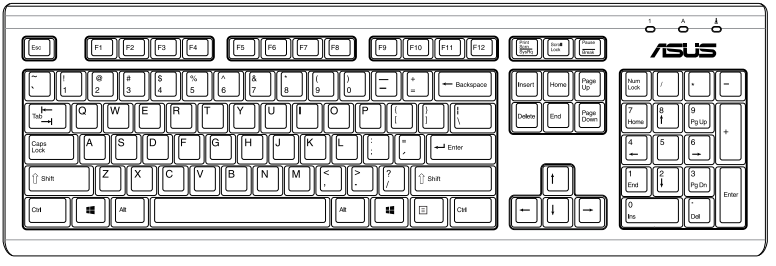
The keyboard varies with models. The illustrations on this section are for reference only.

ASUS KB34211 modern wired keyboard



Hot keys	Description
1	Turns the volume's mute mode on/off.
2	Decreases the system volume.
3	Increases the system volume.

ASUS PK1100 keyboard



Chapter 5
Connecting to the Internet

Wired connection

Use an RJ-45 cable to connect your computer to a DSL/cable modem or a local area network (LAN).

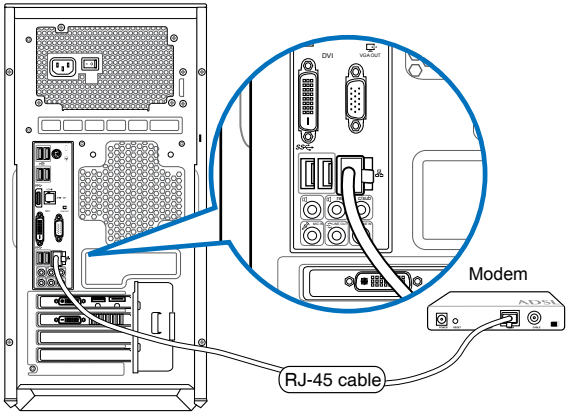
Connecting via a DSL/cable modem

To connect via a DSL/cable modem:

1. Set up your DSL/cable modem.

Refer to the documentation that came with your DSL/cable modem.

2. Connect one end of an RJ-45 cable to the LAN (RJ-45) port on the rear panel of your computer and the other end to a DSL/cable modem.



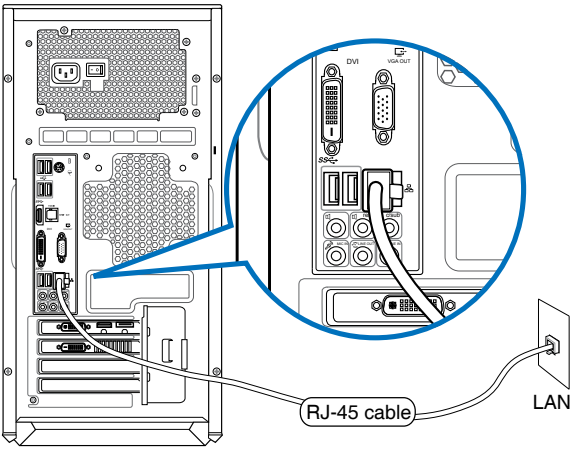
3. Turn on the DSL/cable modem and your computer.
4. Configure the necessary Internet connection settings.

Contact your Internet Service Provider (ISP) for details or assistance in setting up your Internet connection.

Connecting via a local area network (LAN)

To connect via a LAN:

1. Connect one end of an RJ-45 cable to the LAN (RJ-45) port on the rear panel of your computer and the other end to your LAN.



2. Turn on your computer.
3. Configure the necessary Internet connection settings.

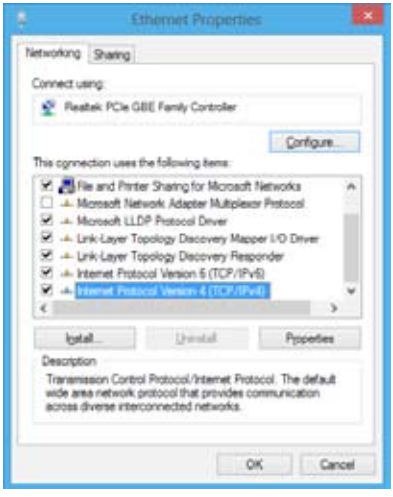
- For more details, refer to the sections **Configuring a dynamic IP/PPPoE network connection** or **Configuring a static IP network connection**.
- Contact your Internet Service Provider (ISP) for details or assistance in setting up your Internet connection.

Configuring a dynamic IP/PPPoE network connection

To configure a dynamic IP/PPPoE or static IP network connection:

1. From the Start screen, click **Desktop** to launch the Desktop mode.

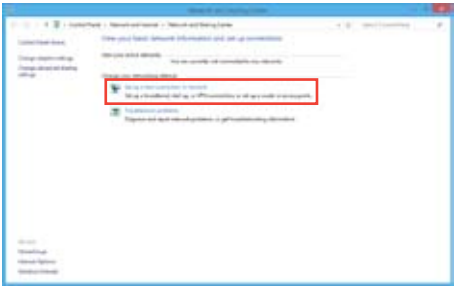
2. From the Windows® taskbar, right-click the network icon  and click **Open Network and Sharing Center**.
3. From the Open Network and Sharing Center screen, click **Change Adapter settings**.
4. Right-click on your LAN and select **Properties**.
5. Click **Internet Protocol Version 4(TCP/IPv4)** and click **Properties**.



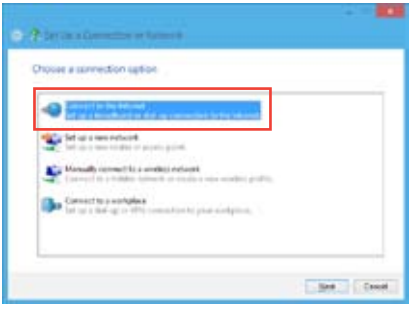
6. Click **Obtain an IP address automatically** and click **OK**.

Continue to the next steps if you are using PPPoE connection.

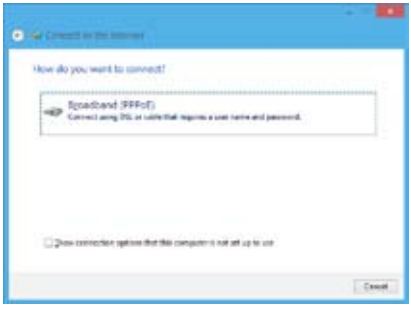
7. Return to the **Network and Sharing Center** and then click **Set up a new connection or network**.



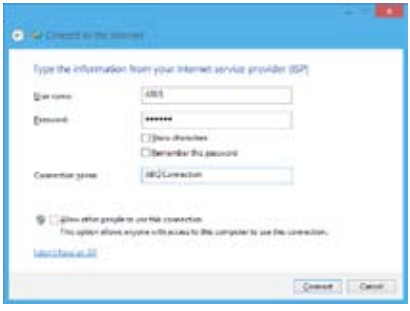
8. Select **Connect to the Internet** and click **Next**.



9. Select **Broadband (PPPoE)** and click **Next**.



10. Enter your User name and, Password, and Connection name. Click **Connect**.
11. Click **Close** to finish the configuration.
12. Click the network icon in the taskbar and click the connection you just created.
13. Enter your user name and password. Click **Connect** to connect to the Internet.



Configuring a static IP network connection

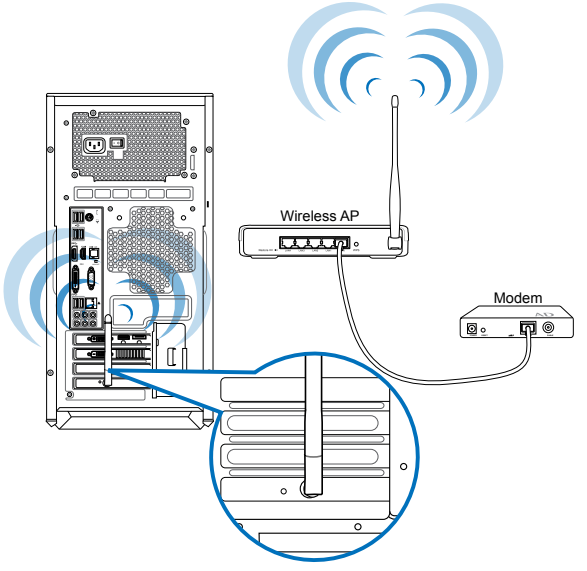
To configure a static IP network connection:

1. Repeat steps 1 to 4 of the previous section **Configuring a dynamic IP/PPPoE network connection**.
2. Click **Use the following IP address**.
3. Enter the IP address, Subnet mask and Gateway from your service provider.
4. If needed, enter the preferred DNS Server address and alternative address.
5. When done, click **OK**.

Wireless connection (on selected models only)

Connect your computer to the Internet through a wireless connection.

To establish a wireless connection, you need to connect to a wireless access point (AP).



- To increase the range and sensitivity of the wireless radio signal, connect the external antennas to the antenna connectors on the ASUS WLAN Card.
- Place the antennas on the top of your computer for the best wireless performance.
- The external antennas are optional items.

To connect to a Wi-Fi network:

1. Do any of the following to launch the **Charm bar** from the Start screen or from any application mode:

   a) Hover you mouse pointer on the upper or lower right of the screen.

   b) On your keyboard, press + <c>.

2. From the Charm bar, select **Settings** and click the network icon .
3. Select the network that you want to connect to from the list.
4. Click **Connect**.

Chapter 6
Using the utilities

English

The Support DVD and Recovery DVD may not be included in the package. For more details on the recovery options in Windows® 8, refer to Recovering your system in this chapter.

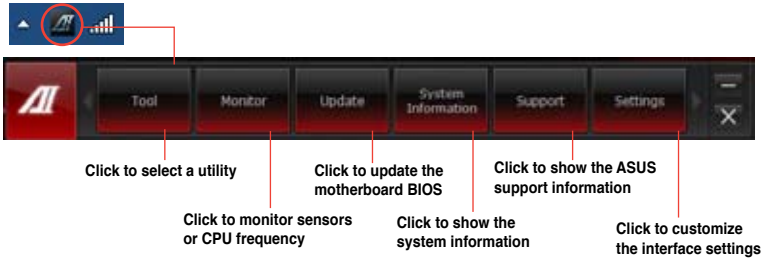
ASUS AI Suite II

ASUS AI Suite II is an all-in-one interface that integrates several ASUS utilities and allows users to launch and operate these utilities simultaneously.

Using AI Suite II

AI Suite II automatically starts when you enter the Windows® operating system. The AI Suite II icon appears in the Windows® notification area. Click the icon to open the AI Suite II main menu bar.

Click each button to select and launch a utility, to monitor the system, to update the motherboard BIOS, to display the system information, and to customize the settings of AI Suite II.



- The applications in the Tool menu vary with models.
- The screenshots of AI Suite II in this user manual are for reference only. The actual screenshots vary with models.

The Tool menu

The **Tool** menu includes the System Level Up, Probe II, Sensor Recorder, and USB 3.0 Boost.

System Level Up

System Level Up allows you to overclock the system in Windows® environment using the profile settings.

To launch System Level up, click **Tool > System Level Up** on the AI Suite II menu bar.

In setting the function, assign the hot keys for the system level up profile exchange. You can adjust the hot key settings manually. See figure below for details.

Adjust the System Level Up via two methods:

BIOS

In the BIOS Setup program, click **AI Tweaker > System Level Up**, and select your desired option.

OC Button

Press the OC button on the upper left side corner of the front panel.

Launching and configuring Probe II

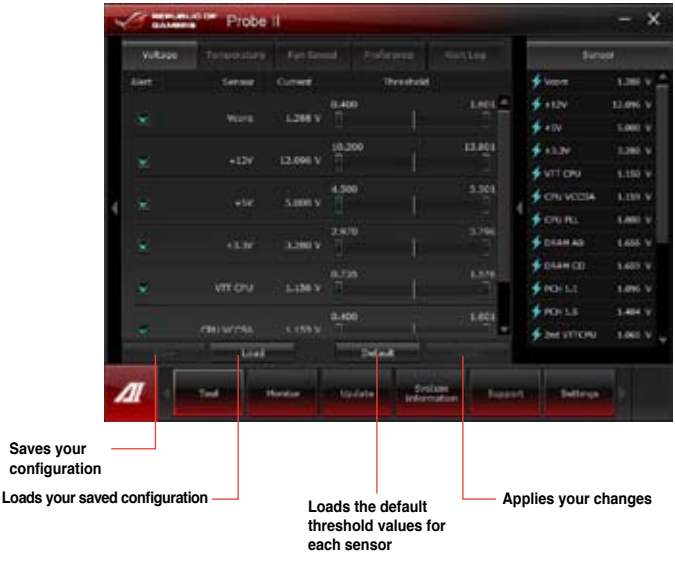
Probe II is a utility that monitors the computer's vital components, and detects and alerts you of any problem with these components. Probe II senses fan rotations, CPU temperature, and system voltages, among others. With this utility, you are assured that your computer is always at a healthy operating condition.

To launch Probe II:

- Click **Tool > Probe II** on the AI Suite II main menu bar.

To configure Probe II:

- Click the **Voltage/Temperature/Fan Speed** tabs to activate the sensors or to adjust the sensor threshold values.
- The **Preference** tab allows you to customize the time interval of sensor alerts, or change the temperature unit.



Launching and configuring Sensor Recorder

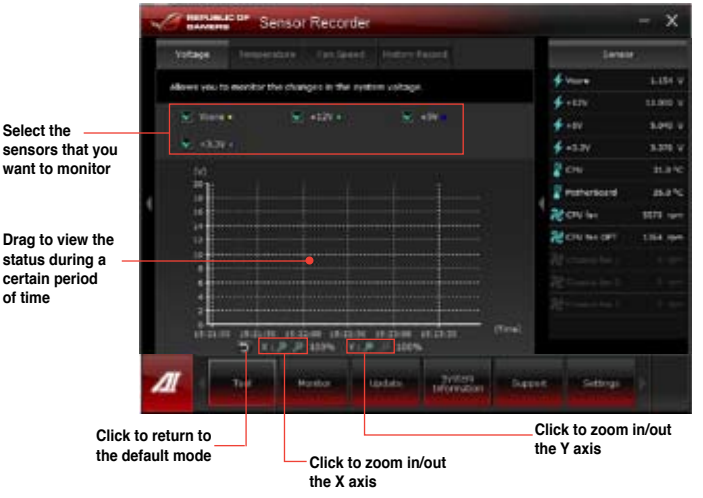
Sensor Recorder allows you to monitor the changes in the system voltage, temperature, and fan speed, as well as recording the changes.

To launch Sensor Recorder:

- Click **Tool** > **Sensor Recorder** on the AI Suite II main menu bar.

To configure Sensor Recorder:

- Click the **Voltage/Temperature/Fan Speed** tabs and select the sensors that you want to monitor.
- The **History Record** tab allows you to record the changes in the sensors that you enable.



Launching and Configuring USB 3.0 Boost

ASUS USB 3.0 Boost technology supports UASP (USB Attached SCSI Protocol) and automatically increases a USB 3.0 device's transfer speed up to 170%.

Launching USB 3.0 Boost

To launch USB 3.0 Boost, click **Tool > USB 3.0 Boost** on the AI Suite II main menu bar.

Configuring USB 3.0 Boost

1. Connect a USB 3.0 device to the USB 3.0 port.

   USB 3.0 Boost automatically detects the property of the USB 3.0 device and switches to Turbo mode or UASP mode (if UASP is supported by the USB 3.0 device).

2. You can manually switch the USB 3.0 mode back to Normal mode at any time.

- Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.
- Due to Intel® chipset limitation, Intel® USB 3.0 ports do not support ASUS 3.0 Boost in Windows XP operating system.
- Use the USB 3.0 devices for high performance. The data transfer speed varies with USB devices.

The Monitor menu

The **Monitor** menu includes the Sensor and CPU Frequency panels.

Launching Sensor

The Sensor panel displays the current value of a system sensor such as fan rotation, CPU temperature, and voltages.

To launch Sensor:

- Click **Monitor** > **Sensor** on the AI Suite II main menu bar.

Launching CPU Frequency

The CPU Frequency panel displays the current CPU frequency and CPU usage.

To launch CPU frequency:

- Click **Monitor** > **CPU Frequency** on the AI Suite II main menu bar.

Resident in the right pane (system information area)

Sensor panel

CPU Frequency panel

The Update menu

The Update menu allows you to update the motherboard BIOS and the BIOS boot logo with the ASUS designed update utilities.

ASUS Update

The ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® OS. The ASUS Update utility allows you to update the BIOS directly from the Internet, download the latest BIOS file from the Internet, update the BIOS from an updated BIOS file, save the current BIOS file or view the BIOS version information.

Updating the BIOS through the Internet

To update the BIOS through the Internet:

1. From the ASUS Update screen, select **Update BIOS from file**, then click **Next**.

2. Select the ASUS FTP site nearest you to avoid network traffic.

   Tick the two items if you want to enable the BIOS downgradable and Auto-BIOS backup functions.

3. Select the BIOS version that you want to download, then click **Next**.

   When no updated version is detected,a message is displayed informing you that there is no new BIOS file from the BIOS server.

4. Click Yes if you want to change the boot logo, which is the image appearing on screen during the Power-On Self-Tests (POST). Otherwise, click No.
5. Follow the onscreen instructions to complete the update process.

Updating the BIOS through a BIOS file

To update the BIOS through a BIOS file:

1. From the ASUS Update screen, select **Update BIOS from file**, then click **Next**.

2. Locate the BIOS file from the Open window, click **Open**, and click **Next**.

3. Click **Yes** if you want to change the boot logo, which is the image appearing on screen during the Power-On Self-Tests (POST). Otherwise, click **No**.
4. Follow the onscreen instructions to complete the update process.

Downloading the BIOS from the Internet

To download the BIOS from the Internet:

1. From the ASUS Update screen, select **Download BIOS from Internet**, and then click **Next**.

2. Select the ASUS FTP site nearest you to avoid network traffic. Type or browse for the location where you want the BIOS file to be downloaded.

   Click **Next**.

3. Select the BIOS version that you want to download, and click **Next**. Click **Finish** to complete the process.

4. You can decide whether to change the BIOS boot logo, which is the image appearing on screen during the Power-On Self-Tests (POST). Click **Yes** if you want to change the boot logo or **No** to continue.
5. Follow the onscreen instructions to complete the update process.

The System Information screen

The System Information screen displays the information about the motherboard, CPU, and memory slots.

- Click the **MB** tab to see the details on the motherboard manufacturer, product name, version, and BIOS.
- Click the **CPU** tab to see the details on the processor and the Cache.
- Click the **Memory** tab and then select the memory slot to see the details on the memory module installed on the corresponding slot.
- Click the **Disk** tab and then select each disk to see the details on it.

The Support screen

The Support screen displays the information about the ASUS website, technical support website, download support website, or contact information.

The Settings screen

The Settings screen allows you to customize the main menu bar settings and the interface's skin.

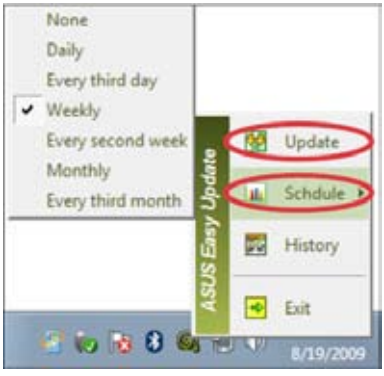
- Application allows you to select the application that you want to enable.
- Bar allows you to modify the bar setting,
- Skin allows you to customize the interface's contrast, brightness, saturation, hue, and gamma.

ASUS Easy Update

ASUS Easy Update is a software tool that automatically detects the latest drivers and applications for your system.

1. From the Windows ® notification area, right-click the **ASUS Easy Update** icon.

2. Select **Schedule** to set how often you want to update your system.
3. Select **Update** to activate the update.



4. Click **OK** to display the items you can download.

5. Check the item(s) you want to download, and then click **OK**.

ASUS Instant On

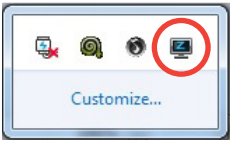
ASUS Instant On gives you with a quick access to the Hybrid Sleep mode.

Using ASUS Instant On

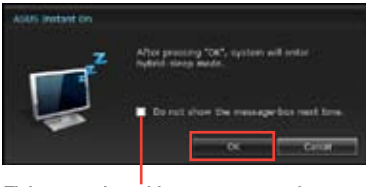
To use ASUS Instant On:

The Instant On utility is pre-installed on your computer and automatically launches after starting up your computer.

1. When starting up your computer, you can see the utility icon from Windows taskbar.



2. Press <**Alt + F1**> and then click **OK** on the confirmation message. Your system will enter the Hybrid Sleep mode.



Tick to not show this message next time.

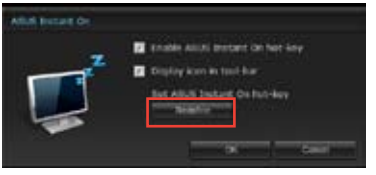
The default hotkey is <**Alt + F1**>. To change it, see the section below.

Setting up ASUS Instant On

To set up ASUS Instant On:

1. Right-click the ASUS Instant On icon from Windows taskbar. The main settings screen appears.

   You can choose to enable/disable ASUS Instant On hotkey, and show/hide ASUS Instant On icon from Windows taskbar.



2. Click **Redefine** button from the main settings screen. The hotkey settings screen appears.
3. Key in the combination keys you want to use for ASUS Instant On hotkey.
4. Click OK to save your changes, and Cancel to discard the changes you made.

Recovering your system

Resetting your PC

The **Reset your PC** option restores your PC to its factory default settings.

Back up all your data before using this option.

To reset your PC:

1. Press <**F9**> during bootup.
2. From the screen, click **Troubleshoot**.
3. Select **Reset your PC**.
4. Click **Next**.
5. Select **Only the drive where the Windows is installed**.
6. Select **Just remove my files**.
7. Click **Reset**.

Recovering from a system image file

You can create a USB recovery drive and use this to recover your PC's settings.

Creating a USB recovery drive

The USB storage device must have at least 16GB available space.

All files on your USB storage device will be permanently deleted during the process. Before you proceed, ensure that you back up all your important data.

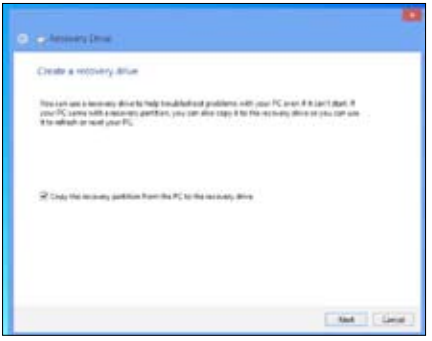
To create a USB recovery drive:

1. Launch the Control Panel from the All Apps screen.

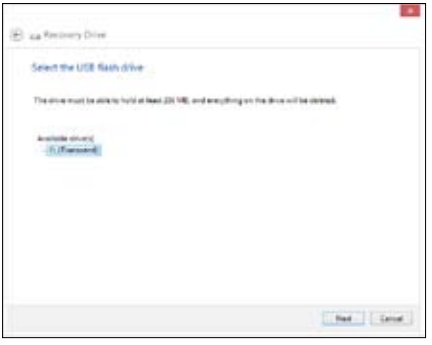
For details, refer to Launching the **All Apps screen** under **Working with Windows® apps**.

2. From the Control Panel's System and Security, click **Find and fix problems**.

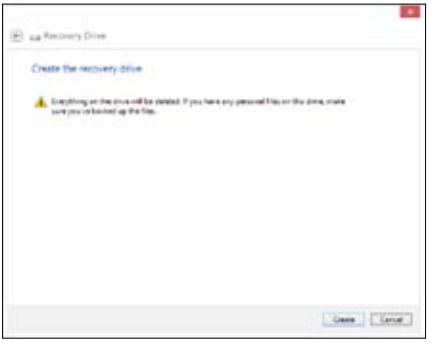
3. Click **Recovery** > **Create a recovery drive**.
4. Click **Copy the recovery partition from the PC to the recovery drive**, and then click **Next.**



5. Select the USB storage device where you want to copy the recovery files.
6. Click **Next**.



7. Click **Create**. Wait for a while for the process to complete.
8. When the process is completed, click **Finish**.



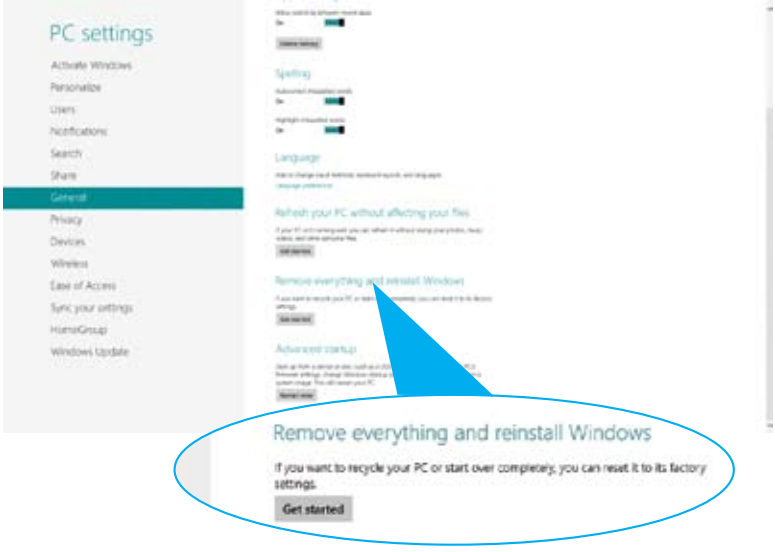
Removing everything and reinstalling Windows

Restoring your PC to its original factory settings can be done using the Remove everything and reinstall option in PC Settings. Refer to the steps below to use this option.

Back up all your data before using this option.

This process may take a while to complete.

1. Launch the **Charm bar**.
2. Click **Settings** > **Change PC Settings** > **General**.
3. Scroll down to view the **Remove everything and reinstall Windows** option. Under this option, click **Get Started.**



4. Follow the onscreen instructions to complete the reinstallation and reset process.

English

Introduction to Intel® 2012 Desktop responsiveness technologies

This document is an overview of the installation and configuration procedures of the Intel® 2012 Desktop responsiveness technologies.

Intel® 2012 Desktop responsiveness technologies feature:

- Intel® Smart Response Technology
- Intel® Rapid Start Technology
- Intel® Smart Connect Technology

System Requirements for Intel® 2012 Desktop responsiveness technologies

In order for the system to run smoothly with the Intel® 2012 Desktop responsiveness features, you must meet the following requirements:

1. CPU: Intel® 3rd/2nd generation Core Processor family
2. OS: Windows® 7 operating systems
3. SSD: One dedicated SSD (Solid State Disk) to support Intel® Smart Response and Intel ® Rapid Start Technology is necessary.

Refer to the **SSD Capacity Requirements** table for the information of SSD size, partition capacity, and system memory requirements.

4. HDD: At least one HDD (Hard Disk Drive) for the system OS drive.
5. DRAM: To enable Intel® Rapid Start Technology, DRAM size smaller than 8GB is required.

Enable the acceleration of Intel® Smart Response Technology before creating the partition for the Intel® Rapid Start Technology.

SSD Capacity Requirements

SSD Partition Capacity Requirements		System DRAM		
		2GB	4GB	8GB
Intel® storage combinations	Intel® Rapid Start	2GB	4GB	8GB
	Intel® Smart Response	20GB	20GB	20GB
	Intel® Smart Response and Intel® Rapid Start	Separate 20GB and 2GB partition (SSD size > 22GB)	Separate 20GB and 4GB partition (SSD size > 24GB)	Separate 20GB and 8GB partition (SSD size > 28GB)
	Intel® Smart Response, Intel® Rapid Start, and Intel® Smart Connect	Separate 20GB and 2GB partition (SSD size > 22GB)	Separate 20GB and 4GB partition (SSD size > 24GB)	Separate 20GB and 8GB partition (SSD size > 28GB)

- The SSD used for Intel® Rapid Start and Intel® Smart Response is should not be used for creating RAID.
- Due to OS behavior, Intel® Rapid Start Technology works inefficiently with over 4G system memory under a Windows® 7 32-bit operating system.
- Only Intel® internal SATA ports (gray and blue) support Intel® 2012 Desktop responsiveness technologies.
- The performance of Intel® Smart Response Technology and Intel® Rapid Storage Technology vary based on the installed SSD.

Intel® Smart Response Technology

Intel® Smart Response Technology boosts overall system performance. It uses an installed fast SSD (min. 20GB available) as a cache for frequently accessed operations, speeding up hard drive/main memory interaction. Key benefits are expedited hard drive speeds, reduced load and wait times, and maximized storage utilization. Power consumption also goes down by reducing unnecessary hard drive spin.

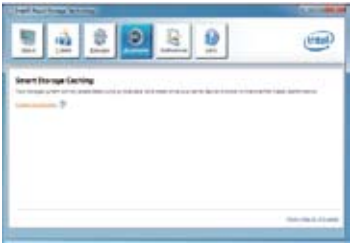
Before applying Intel® Smart Response Technology, setting the SATA Mode BIOS item to [RAID mode] in BIOS setup is necessary.

Installing Intel® Smart Response Technology

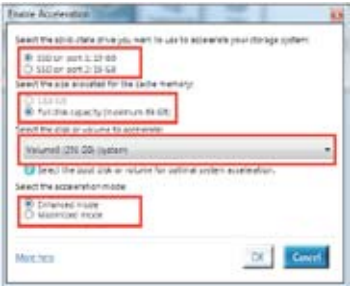
1. Place the support DVD into the optical drive. The Drivers installation tab appears if your computer has enabled the Autorun feature.
2. Click the **Drivers** tab, then click **Intel® Rapid Storage Technology Driver** software.
3. Follow the onscreen instructions to complete the installation.

Using the Intel® Smart Response Technology

1. Click **Accelerate** to launch Smart Response Technology settings.



2. a. Select the SSD you want to use to accelerate your storage system.
   b. Select the size allocated for SSD caching.
   c. Select which HDD will be used for caching.
   d. **Enhanced mode**: WRITE THROUGH, write to SSD and HDD at the same time.
   Maximized mode: WRITE BACK, write to SSD and write back to HDD at a later time.



3. Select **Disable Acceleration** to disable this function, and select **Change Mode** to switch acceleration mode to Enhanced/ Maximized.

- To enable Intel® Smart Response Technology, you need at least one SSD (≥20GB) and an HDD. Only one SSD can be assigned for caching.
- If you want to restore the OS, go to **BIOS Option ROM > Acceleration Options** and remove the **Disks/Volume Acceleration** to disable Intel® Smart Response Technology.
- The maximum caching size on the SSD is 64GB. If the caching size set exceeds this limit, the excess storage capacity can still be identified by the system for normal storage.

Intel® Rapid Start Technology

Intel® Rapid Start Technology allows you to quickly resume your computer from sleep mode. Saving your computer's system memory to the configured SSD provides a faster wake-up response time, but keeps the energy at a low profile.

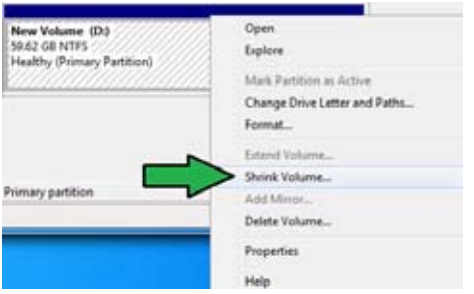
- Before applying Intel® Rapid Start Technology, go to **Advanced Mode > Advanced > PCH Configuration** in BIOS item, and enable Intel® Rapid Start Technology.
- Ensure to follow the procedure for **Creating a partition** precisely to enable the Intel Rapid Start function. An error message appears if you install the Intel® Rapid Start Utility before creating a partition.

Creating a partition

- Backup your data before using the Microsoft partition tool. Incorrect partitioning will result in data loss.
- Adjusting the DRAM to a high frequency will result in unstable system performance.

1. Go to Start, right-click **Computer > Manage > Disk Management**.
2. Select the SSD that you want to create the partition.

3. Right click the **New Volume** that you want to shrink from, and select **Shrink Volume**.



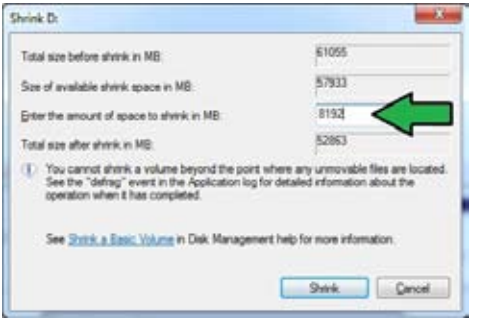
4. If your SSD is not initialized and unformatted:

   a. Right click the disk that you want to create the partition in, and select **Initialize**.

   b. Right click the unallocated volume, select **New Simple Volume**, and follow the remaining steps.

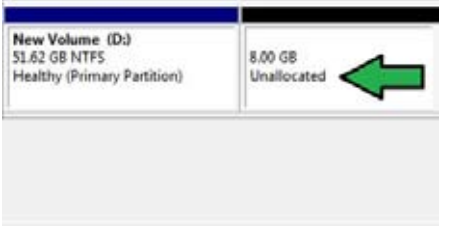
If your SSD is smaller than 64GB, and is set to **Full disk capacity** caching option for Intel® Smart Response, you will not see any volume in the Disk Management tool. Set your cache memory value of **18.6GB** in Intel® Smart Response to allow enough capacity for the Intel® Rapid Start partition.

5. Key in the required partition size. The value must be equal to the system DRAM memory (1GB = 1024MB). Click **Shrink**.



Go to **Start > Control Panel > System and Security > System**, and check the DRAM size information.

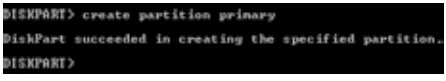
The unallocated volume is allocated to the selected disk.



6. To launch the disk partitioning tool, click **Start > Programs > Accessories > Command Prompt** tool.
7. Type **`diskpart`** and press **Enter**.
8. In the diskpart prompt, type **`list disk`**, and press **Enter**. Select the disk with the unallocated volume by typing **`select disk x`** (x = disk number), and press **Enter** .

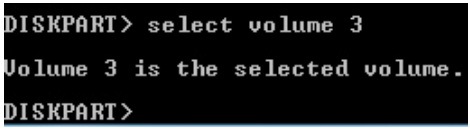
- The value "**x**" refers to a disk number where you created the unallocated partition.
- Refer to step 5 for details about the unallocated disk space in the SSD.

9. Type **`create partition primary`**, and press **Enter.**



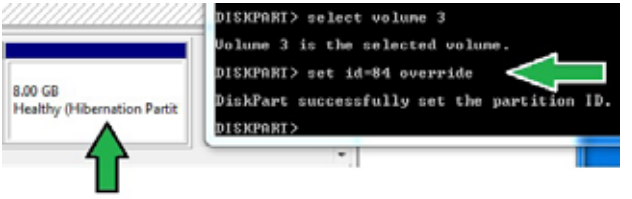
10. After creating a primary partition, type **`detail disk`**, and press **Enter** to view the details of the partitioned disk.

11. Select the RAW volume which has the same size as the shrinked volume, type **`select volume x`** (x = number), and press **Enter** to store the Intel® Rapid Start partition.



- The value "**x**" refers to a disk number where you want to create the store partition.

12. Type **`set id=84 override`**, press **Enter**, and wait for the “shrinking process” until the Disk Management utility identifies a new partition called **Hibernation Partition**.



The **Hibernation Partition** does not appear when you choose “GPT (GUID Partition Table store type”. Ensure that the “Unallocated” label disappears from the volume, and a new partition is identified.

13. Reboot the system after creating the partition.

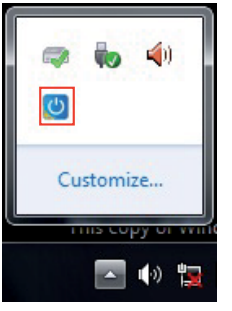
The partitioning process for the Intel® Rapid Start Technology is incomplete if the computer is not rebooted. This may result in failure of the Intel® Rapid Start Technology to function.

Enabling and disabling the Intel® Rapid Start Technology under the OS

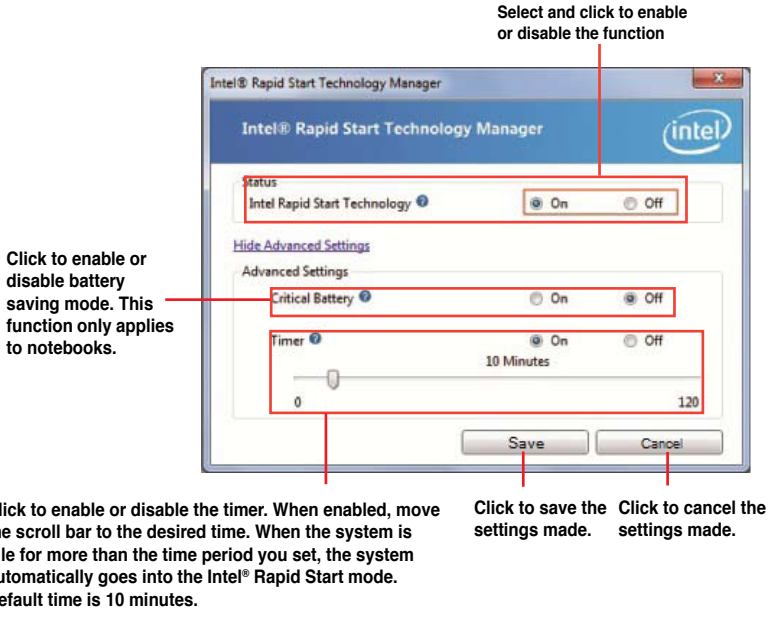
Install the Intel® Rapid Start Technology from your support DVD in order to launch the Intel® Rapid Start Manager.

After creating the partition, launch the Intel® Rapid Start Manager to enable or disable the Intel® Rapid Start Technology.

1. Click the **Show hidden icons** arrow from the right side of the task bar, and click the **Intel® Rapid Start Technology Manager** icon.



2. Tick **On** in the Status field to enable the feature, and click **Save.**

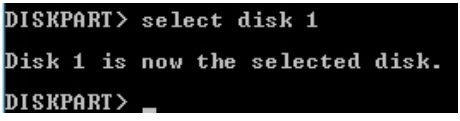


Recovering the partition

This procedure allows you to delete the Intel® Rapid Start Technology from your system, and recover the partition you made for the Intel Rapid® Start Technology installation.

1. Run the **Command Prompt** tool.
2. Type **`diskpart`** and press **Enter**.
3. At the diskpart prompt, type **`list disk`** after DISKPART, and press **Enter.**

4. Select the disk (SSD) where the Intel® Rapid Start Technology is installed for volume recovery, type **`select disk x`** (x = number), and press **Enter**.

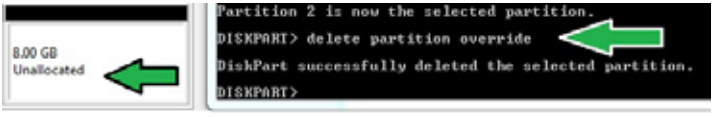


The value "**`x`**" refers to a disk number where you want to delete the store partition.

5. Type **`list partition`**, press **Enter,** and select the partition where the Intel® Rapid Start Technology is installed by typing **`select partition x`** (x = number), and press **Enter**.

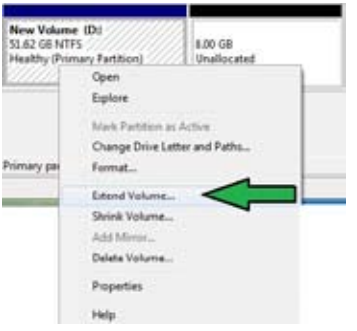
The value "**x**" refers to a disk number where you want to delete the store partition.

6. Type **`delete partition override`**, and press **Enter**. The diskpart utility deletes the selected partition

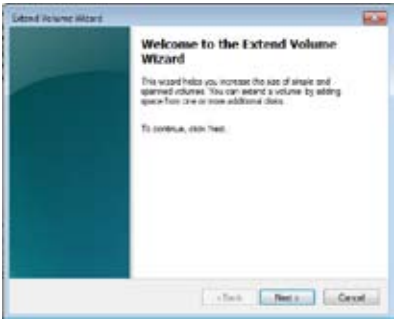


7. In the desktop, click **Start**, right-click **Computer**, and click **Manage.**

8. In the Computer Management window, click **Disk Management**, right click the shrinked new volume, and select **Extend Volume**.



9. As the Extend Volume Wizard appears,click **Next**.



10. Click **Next** after selecting the default disk.

11. Extend volume setup is complete. Click **Finish** to recover the Intel® Rapid Start Technology partition.
12. Reboot the system after deleting the partition.
13. Go to **Start > Control Panel > Programs > Programs and Features >** to remove the Intel® Rapid Start Manager for the complete deletion of Intel® Rapid Start Technology.

Intel® Smart Connect Technology

The Intel® Smart Connect Technology is a feature that provides the latest content updates and energy efficiency to your computer's platform.

Once installed and activated, the Intel® Smart Connect Technology periodically wakes up the system from sleep mode, performs user state gathering, and initiates re-entry to sleep mode to wake-up after a set time interval.

- Intel® Smart Connect Technology supports Windows® Live Mail, Microsoft Outlook, and Seesmic applications.
- It is necessary to enable the items of the PCH Configuration in the BIOS before applying the Intel® Smart Connect Technology. Go to **Advanced Mode > Advanced > PCH Configuration**, and enable the Intel® Smart Connect Technology.

Installing the Intel® Smart Connect Technology

1. Insert the support DVD into the optical drive.
2. Go to **Utilities**, and click **Intel® Smart Connect Technology**.
3. As the setup wizard appears, click **Next** to begin the setup.
4. Tick **I accept the terms in the License Agreement**, and click **Next**.

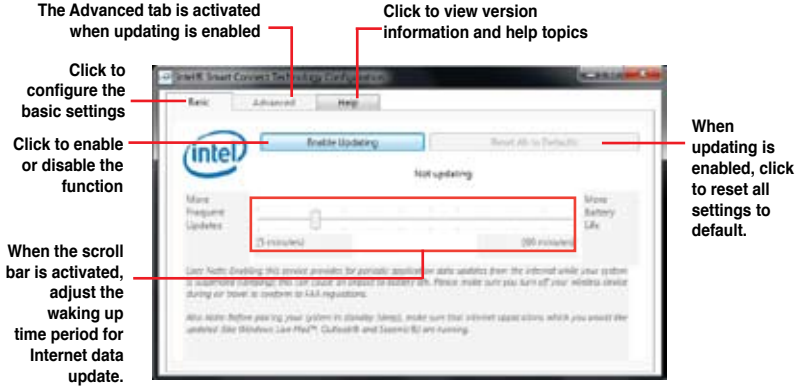
5. Select all and click **Next** for **Custom Setup**.
6. Click **Install** to proceed the installation.

7. Click **Yes** to restart your system, and for the newly installed Intel® Smart Connect Technology to take effect.

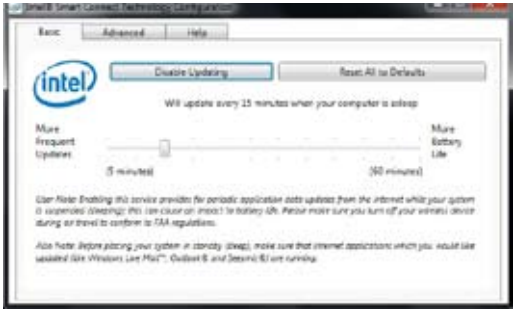
Using the Intel® Smart Connect Technology

- Before the system goes to sleep mode, ensure to keep your applications on the desktop, and enter the applications, passwords.
- Ensure that the internet is in connection when enabling the Intel® Smart ConnectTechnology.

1. Click **Start > All Programs > Intel > Intel® Smart Connect Technology**.
2. In the **Basic** tab, click **Enable Updating**. When enabled, the **Advanced** tab is available for advanced function settings.



3. To disable the updating function, click **Disable Updating**. Clicking this button automatically disables the configuration in the **Advanced** tab. To reset to defaults, click **Reset All to Defaults**.



4. In the **Advanced** tab, set up the schedule during low power usage time period for power saving. This setting only applies to the assigned time period.

5. In the **Help** tab, click **About** to view the version. Click **Topics** to learn more about the Intel® Smart Connect Technology and its configuration.

Chapter 7
Troubleshooting

Troubleshooting

This chapter presents some problems you might encounter and the possible solutions.

? *My computer cannot be powered on and the power LED on the front panel does not light up.*

- Check if your computer is properly connected.
- Check if the wall outlet is functioning.
- Check if the Power Supply Unit is switched on. Refer to the section **Turning your computer ON** in Chapter 1.

? *My computer hangs.*

- Do the following to close the programs that are not responding:
  1. Simultaneously press <Alt> + <Ctrl> + <Delete> keys on the keyboard, then click **Task Manager**.
  2. Under **Task Manager** in the **Processes** tab, select the program that is not responding, then click **End Task**.
- If the keyboard is not responding. Press and hold the Power button on the top of your chassis until the computer shuts down. Then press the Power button to turn it on.

? *I cannot connect to a wireless network using an ASUS WLAN Card (on selected models only)?*

- Ensure that you enter the correct network security key for the wireless network you want to connect to.
- Connect the external antennas (optional) to the antenna connectors on the ASUS WLAN Card and place the antennas on the top of your computer chassis for the best wireless performance.

? *The arrow keys on the number key pad are not working.*

Check if the Number Lock LED is off. When the Number Lock LED is on, the keys on the number key pad are used to input numbers only. Press the Number Lock key to turn the LED off if you want to use the arrow keys on the number key pad.

? *No display on the monitor.*

- Check if the monitor is powered on.
- Ensure that your monitor is properly connected to the video output port on your computer.
- If your computer comes with a discrete graphics card, ensure that you connect your monitor to a video output port on the discrete graphics card.
- Check if any of the pins on the monitor video connector is bent. If you discover bent pins, replace the monitor video connector cable.
- Check if your monitor is plugged to a power source properly.
- Refer to the documentation that came with your monitor for more troubleshooting information.

? *When using multiple monitors, only one monitor has display.*

- Ensure that the both monitors are powered on.
- During POST, only the monitor connected to the VGA port has display. The dual display function works only under Windows.
- When a graphics card is installed on your computer, ensure that you connect the monitors to the output port on the graphics card.
- Check if the multiple displays settings are correct. Refer to section **Connecting multiple external displays** in Chapter 3 for details.

? *My computer cannot detect my USB storage device.*

- The first time you connect your USB storage device to your computer, Windows automatically installs a driver for it. Wait for a while and go to My Computer to check if the USB storage device is detected.
- Connect your USB storage device to another computer to test if the USB storage device is broken or malfunctions.

? *I want to restore or undo changes to my computer's system settings without affecting my personal files or data.*

You can use Windows® **Refresh everything without affecting your files** recovery option to restore or undo changes to your computer's system settings without affecting your personal data such as documents or photos. To use this recovery option, click **Settings** > **Change PC Settings** > **General** from the Charm bar, select **Refresh everything without affecting your files**, and click **Get Started**.

? *The picture on the HDTV is distorted.*

- It is caused by the different resolutions of your monitor and your HDTV. Adjust the screen resolution to fit your HDTV. To change the screen resolution:

  Do any of the following to open the **Screen Resolution** setting screen:

  From the Start screen

  a) Launch the All Apps screen and pin Control Panel on the Start screen.

  For details, refer to **Pinning an app on the Start screen** from the section **Working with Windows® apps**.

  b) From the Control Panel, click **Adjust screen resolution** under **Appearance and Personalization**.

  From the Desktop Mode screen

  a) Launch the Desktop Mode from the Start screen.

  b) Right click anywhere on your Desktop Mode screen. When the pop-up menu appears, click **Personalize** > **Display** > **Change display settings.**

? *My speakers produce no sound.*

- Ensure that you connect your speakers to the Line out port (lime) on the front panel or the rear panel.
- Check if your speak is connected to an electrical source and turned on.
- Adjust your speakers' volume.
- From the Desktop Mode screen, ensure that your computer's system sounds are not Muted.
  - If it is muted, the volume icon is displayed as  . To enable the system sounds, click  from the Windows taskbar, then move the slider to adjust the volume.
  - If it is not muted, click  and drag the slider to adjust the volume.
- Connect your speakers to another computer to test if the speakers are working properly.

? *The DVD drive cannot read a disc.*

- Check if the disc is placed with the label side facing up.
- Check if the disc is centered in the tray, especially for the discs with non-standard size or shape.
- Check if the disc is scratched or damaged.

? *The DVD drive eject button is not responding.*

1. Hover your mouse pointer over the lower left corner of Windows® desktop then right-click on the Start screen's thumbnail. From the pop-up menu, click **File Explorer** to open the Computer screen.
2. Right-click 

, then click **Eject** from the menu.

Power

Problem	Possible Cause	Action
No power (The power indicator is off)	Incorrect power voltage	• If your computer has a power voltage switch, set it to your area's power requirements. • Adjust the voltage settings. Ensure that the power cord is unplugged from the power outlet.
	Your computer is not turned on.	Press the power key on the front panel to ensure that your computer is turned on.
	Your computer's power cord is not properly connected.	• Ensure that the power cord is properly connected. • Use other compatible power cord.
	PSU (Power supply unit) problems	Contact the ASUS Service Center about installing another PSU on your computer.

Display

Problem	Possible Cause	Action
No display output after turning the computer on (Black screen)	The signal cable is not connected to the correct VGA port on your computer.	• Connect the signal cable to the correct display port (onboard VGA or discrete VGA port). • If you are using a discrete VGA card, connect the signal cable to the discrete VGA port.
	Signal cable problems	Try connecting to another monitor.

LAN

Problem	Possible Cause	Action
Cannot access the Internet	The LAN cable is not connected.	Connect the LAN cable to your computer.
	LAN cable problems	Ensure the LAN LED is on. If not, try another LAN cable. If it still does not work, contact the ASUS service center.
	Your computer is not properly connected to a router or hub.	Ensure that your computer is properly connected to a router or hub.
	Network settings	Contact your Internet Service Provider (ISP) for the correct LAN settings.
	Problems caused by the anti-virus software	Close the anti-virus software.
	Driver problems	Reinstall the LAN driver

Audio

Problem	Possible Cause	Action
No Audio	Speaker or headphone is connected to the wrong port.	• Refer to your computer's user manual for the correct port. • Disconnect and reconnect the speaker to your computer.
	Speaker or headphone does not work.	Try using another speaker or headphone.
	The front and back audio ports do not work.	Try both the front and back audio ports. If one port failed, check if the port is set to multi-channel.
	Driver problems	Reinstall the audio driver

System

Problem	Possible Cause	Action
System speed is too slow	Too many programs are running.	Close some of the programs.
	Computer virus attack	• Use an anti-virus software to scan for viruses and repair your computer. • Reinstall the operating system.
The system often hangs or freezes.	Hard disk drive failure	• Send the damaged hard disk drive to ASUS Service Center for servicing. • Replace with a new hard disk drive.
	Memory module problems	• Contact the ASUS Service Center for assistance.
	There is not enough air ventilation for your computer.	Move your computer to an area with better air flow.
	Incompatible softwares are installed.	Reinstall the OS and reinstall compatible softwares.

CPU

Problem	Possible Cause	Action
Too noisy right after turning on the computer.	Your computer is booting up.	It is normal. The fan runs on its full speed when the computer is powering on. The fan slows down after entering the OS.
	The BIOS settings have been changed.	Restore the BIOS to its default settings.
	Old BIOS version	Update the BIOS to the latest version. Visit the ASUS Support site at **http://support.asus.com** to download the latest BIOS versions.
Computer is too noisy when in use.	The CPU fan has been replaced.	Ensure that you are using a compatible or ASUS-recommended CPU fan.
	There is not enough air ventilation for the computer.	Ensure that your computer is working in an area with good air flow.
	The system temperature is too high.	• Update the BIOS. • If you know how to reinstall the motherboard, try to clean the inner space of the chassis. • Contact the ASUS Service Center for assistance.

If the problem still persists, refer to your Desktop PC's warranty card and contact the ASUS Service Center. Visit the ASUS Support site at **http://support.asus.com** for the service center information.

ASUS contact information

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*** EUR 0.14/minute from a German fixed landline; EUR 0.42/minute from a mobile phone.**

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